

# Educational Supplement

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## Break

### Once more into the breach...

What should the Equal Opportunities Commission be doing about education? It seems worth asking this rather elementary question again now that the EOC is about to advertise for a new education officer, particularly since it is anxious to make a fresh start after past troubles in the education department.

The EOC makes an easy sitting target, but many of its difficulties are not of its own making. Its powers are circumscribed by the Act which set it up and nudged it by the other government departments and agencies on whose actions it enforces its status and salary structure is laid down by the Civil Service Department, which has some bearing on the sort of staff it can attract (and indeed its first lot of staff was chosen by the Home Office Planning Committee before all the commissioners were appointed and in a position to advise).

There are plenty of interpretations of what its role should be. The DES thinks it should be clivvying and changing attitudes, but not confronting people. Ardent feminists believe that a good deal more confrontation is called for, and they are not alone in this view. At the EOC they are clear that they have to stop breaches of the law, although the Act which set them up is weaker on education than on other fields, which tends to make the department's position in employment more within the commission's remit.

The commissioners agree with the DES about changing attitudes, notably among teachers and parents, though there is sometimes a feeling that it is the DES which needs to be clivvied into changing its attitude into one of more active co-operation.

Eric Robinson, principal of Bradford College and the commissioner with the main responsibility for education, points out that neither the DES nor the Manpower Services Commission has the same awareness of sexual discrimination as it has of race. The Green Paper and the Holland report were strong on opportunities for racial integration, but had little to say on discrimination against girls; the DES curriculum review made no

mention of it in the draft questionnaire, until prevailed upon by the EOC.

Although the DES could clearly do a lot more to spell out what needs to be done, obviously the EOC education department must bear the main brunt of drawing attention to discrimination where it exists in curriculum choice, textbooks, careers advice and the whole political minefield of allocation and selection.

It will be one of the duties of the new education officer to make explicit their attitude through publicity, conferences and publications aimed both at the education profession and the general public. Law enforcement is still top of the list, of course, though not many cases are brought to the EOC and frequently the people concerned don't want to take them further. Parents who have complained about curriculum options, for instance, will probably be too nervous about victimization of their daughters to take the advised course and go to court.

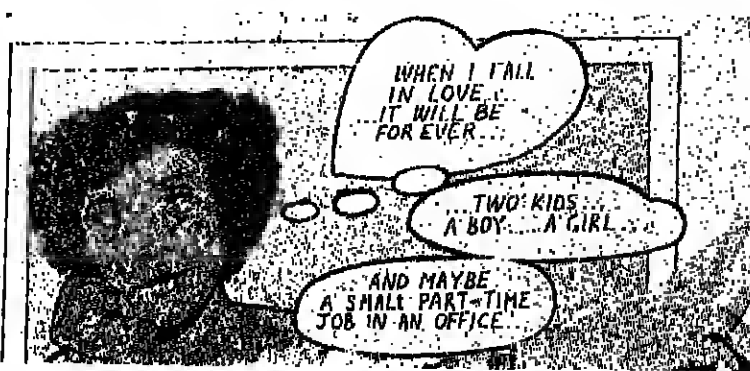
Of course, only a thorough monitoring exercise could give a clear picture of what is doing wrong. This involves a good deal of monitoring (woodwork v needlework, etc) in curriculum choice. The EOC has the staff and resources for that and the inspectors—who have the best information on what is going on—say it is nothing to do with them.

### ... or a little more investigation?

Nevertheless, to EOC does have enough complaints to record to undertake a number of formal investigations on subjects like student grants, employment and promotion of teachers, careers advice and MSC entry in job centres and TOPS courses. It has powers to do this, which it wants to use more in the future, as well as conducting smaller monitoring investigations which have not at great and but practice in schools or, i.e., a.s.

The new education officer will have to be able to identify which cases are worth further investigation, write policy papers, supervise regular queries, common on co-ordination and run a desk. He or she will also have to be able to identify which cases are worth further investigation, write policy papers, supervise regular queries, common on co-ordination and run a desk.

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Further evidence that the EOC education department is in urgent need of a firm hand at the top (see left) comes with the October issue of Spare Rib, the women's liberation magazine, which is devoted to an exposé of sexism in schools in Spare Rib's customary student style.

A free pull-out poster comes with it which they hope "will go up on a lot of classroom walls." The bold message in words and pictures contrasts traditional and feminist aspirations: love, marriage and kids on the one hand; equal pay and training opportunities, free day nurseries and contraception on the other. At the bottom, in smaller type, it mentions that the poster is funded by the EOC and lists useful contacts like the National Abortion Campaign, Lesbian Link and London Rape Crisis Centre. Not the sort of thing everyone will want up in the classroom, however effectively the basic message on sexism is put over.

The EOC gave Spare Rib a £3,772 grant in March, 1977, for well-posters and materials for use in schools and FE colleges, under Section 54 of the Sex Discrimination Act. No provision was made for vetting the clause on grants, but it looks as if the EOC will have to devise a way of preventing their money being spent on things that may do their cause more harm than good.

education officer. The commission hopes to attract someone bright on the way up the administrative ladder who can hold their own on training as well as education, and who wants to find their way about on the national scene. Whether such a candidate, however competent, would carry enough weight where it matters is open to question, but it adds another interesting challenge to what could be a genuinely rewarding job.

Of course, the commissioners can be wheeled on when the big guns are needed, though this has not always worked well in the past. A recent letter from the EOC chairman, Baroness Lockwood, to Richard O'Brien, her counterpart in the MSC, which reiterated her view "that women should be more visibly represented in the commission's work" is a case in point. It was intended to do so.

### And this is Ms...

The EOC complains that TOPS courses are blatantly biased with too many courses painting towards traditional women's jobs. So it was ironic that the MSC's most famous graduate of a craft course turned out this week to be the Gorsium girl, terminus student, Astrid Pratt. After studying at evening classes for a City and Guilds certificate in car mechanics, she did a TOPS course at the Fowler Skill Centre, and on the strength of it got a job as a troublemaker in a workshop organized under the Youth Opportunities Programme. It just shows what a determined and ambitious girl can do without any well-meaning advice.

Moories on reasons for vandalism with environmental poor control, lack of discipline in the city of urban life the frontage of the right, extremists agreement to a student one furms and organized vandalism, plus a role to play in the inevitable unrelenting political about power relations and the struggle.

The outcome of the strike was as predictable as the sun. There is an immediate all-out solution that will solve the problem of the vandalized. Which brings us to the Mr Rome's play. The argument is that the majority of young people are incapable of making anything they commit on a vandalism, thus making it impossible to task to the social workers' managers other concerned individuals in grips with the problem. Credence is lent to this by the fact that originally was to have been written by an offender who developed a playwriting while in jail, it came to writing about a year and a half later. Details from Second City Company, University of Centre for the Arts, Birmingham, B4 7ET, 021-359 5767.

### Great and small

More debate about just how the Great Debate was to be speech Schools Council and John Tomlinson made the point that the Green Paper was a document which sprang off the debate and had a print run of a further 10,000 produced.

Yet the Manpower Services Commission, a body which has just like the DES, made a place 80,000 copies of the Report on youth unemployment. They gave them all away free, but another 30,000 to keep a demand. No prizes for which document was made available to all who might be interested in it. The MSC had rather more to give away via its capital DES.

### Next week

An alternative way? The report "Little" schools in the north, and suggests that the encouragement could be given to experimental schools in Britain. Heather Nell on the Manpower Services Commission's special tour.

## Just as we thought' is main reaction to primary report

There was general welcome this week for the HMI's major survey of primary schooling, which said that the standards of teaching and learning were generally good, but that the standards of achievement were not high enough. The report was welcomed by the National Association of Head Teachers, who said it was a "valuable contribution to the debate on primary education".

The survey, based on a sample of 542 schools, explored three sets of questions. The first relates to standards of achievement and for this the HMI's called on the National Foundation for Educational Research for standardized tests. The second set is concerned with the content of the curriculum and the extent to which it covers essential ground. The third set is devoted to questions about the matching of teaching and learning to the full range of ability within the primary school. Questions which come into the second and third categories were studied by the HMI's own technique of visitation and observation.

### Extra: Science

Leaders, 21 School to work, 12: sport, 16: facts, news, 17: letters, 20: 21: features, experimental schools, David Little schools, Tynd, 23-25: books, David Little on rock, music, sex education, paperback, children's literature, history, 27-30: resources, 31: 32: Talkback, teacher, racism, pre-school co-operation, assessment files, 34: Arts review, news and current affairs on radio, cinema, drama, old to the Third World, 94, 95: Break, Chess, crossword, 96.

## Curate's egg: HMI's primary review

It is a safe bet that in Primary Education in England, Her Majesty's Inspectorate have provided the Stationery Office and the Department of Education and Science with a best-seller. Unfortunately, many who want to get hold of a copy quickly will be disappointed; supplies are being held up by an industrial dispute. This may take the edge off the impact of the document in the primary schools, but can take nothing from its importance as description, diagnosis and prescription.

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The riskiness of this approach serves as an immediate reminder of the limitations of tests alone. This survey is able to make some numerical statements about standards in reading and mathematics, but these are of modest value. The test scores are mute about what constitutes good and bad practice and, though the HMI's are prepared to describe the maths scores as disappointing, the interesting part of what they have to say in this respect comes from patient observation rather than mechanical testing.

The HMI's dispose quickly of accusations that the schools have neglected reading and maths. This was a major element in the Black Paper thesis, coupled as it was with an attack on the teachers whose neglect of the basic subjects was attributed to ideology and prejudice. This line of argument gets no support. If it were just a

matter of giving basic subjects more priority, it would be relatively simple to raise standards. But the HMI's find that the basic subjects are not neglected, that they take pride of place, and that teachers are ideologically aware of their importance. Improvement in the basic subjects, has to be sought, therefore, by the much more difficult processes of curriculum review, and by the improvements in technique and perception which may be brought about by in-service training.

This is not a handbook for "back to the basics". But it is much concerned to find better and more effective ways of teaching them. "Back to the basics" would be a false slogan because it suggests narrower, more blinkered concentration on particular processes. The message here is that of Bullock and *English Across the Curriculum*—the complementary nature of all primary studies and the importance of a rich diet.

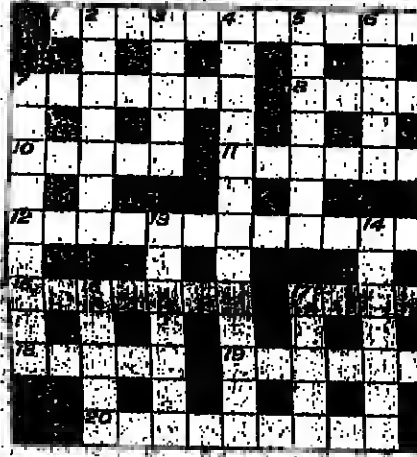
Specific criticisms in the survey, however, are not softened by this general approach and there will be no shortage of candid friends to point them out. There is no escaping the implication that in some primary classes, the brighter pupils are not given work to stretch them. This serious charge is reinforced by the even more damaging suggestion that this is because teachers consistently underestimate what they can and should be doing, especially in the inner city schools, where there is already the greater danger that parents, too, will undervalue the children's educational potential.

Continued on page 2

### No comment

"Babies on School Premises" Following discussion of educational and insurance implications, it was agreed that babies should be allowed on school premises for the following reason only—as a teaching aid: in which case the Authority's insurance cover was valid providing normal teaching safeguards were observed. (From "Notes on a meeting between C&D and Secondary Headteachers".)

### Crossword No 1,151



#### Across

- Not a condition that Dr. Hornard could remedy (11).
- It's a pen for the wise (7).
- Point out for the old Reel (5).
- The going rains (13).
- The story is "and" and will in very close (11).
- Across for stop and go motorists (7, 8).
- Recorded by the Sunday 171.
- Naturally blooming (5).
- Refrain the best friend (5).
- The small beginning of a fern (7).
- The Royal Heritage, for example (10).
- Penguin, both or coo (7).

#### Down

1. Dances that are quite staggering (5).
- Could be a race of those? (7, 8).
- Where water runs away a transposition makes for disapproval (7).
- Of course it's a bore getting no interest (5).
- Does it reduce the noise made by cyclists? (4, 5).
- Conversely put one's foot down (5).
- Looks as if the back way is shut off (7).
- Dye a stocking and conceals a pair (5).
- The one who makes you pay the penalty (5).
- Solution to Puzzle No 1,150.

### Bridge

Regular readers know that I strongly believe that highly artificial bidding systems are out of place in rubber bridge. For the game to be fair and enjoyable, artificial bids must be explained to one's opponents, and this uses up too much time as well as destroying the rhythm.

On the other hand a certain number of gadgets—such as the Unusual No. Trump, Ace-bidding bids, etc.—are useful in a certain way. They are not artificial in the sense that they are not explained to one's opponents, but they are artificial in the sense that they are not explained to one's opponents.

I don't like the West cards and opened 2 clubs, which promised game going, arranged, not necessarily as strong as the more familiar club opening, but also asked partner

### Bridge

to identify any aces he may have. His 3 diamond reply promised the ace of that suit, and no others.

This was disappointing, as I made the natural bid of three hearts, and partner answered three NT, which was most revealing. Since he had chosen not to support my suit, or bid any of his own, he was effectively marked with both block kings. I continued slowly with four hearts—after all, I still had several block losers—but partner went on with four NT.

The play was uninteresting. South led a diamond, hearts broke 3-2 and spades rather luckily 3-3, but even without the spade break there are several chances for 12 tricks provided the defence is played by East. We did lose well a few opportunities.

John Gre







# Tories in public policy split over exam league tables

by Wendy Berliner

A split in education policy within the Conservative Party became evident at the weekend when Mr Norman St John-Stevens, Shadow Education Secretary, publicly rejected any idea of publishing league tables of exam results.

His speech—his constituents at Chelmsford on Friday—came at the end of a week in which his junior, Dr Rhodes Boyson, MP, had grabbed the headlines by comparing exam results from Manchester and nearby Trafford.

The normally confidential results revealed that a child in Trafford had three times more chance of getting an A level than a child at school in Manchester. Such a comparison, Mr Boyson said, was "a bit like comparing apples with oranges".

Even though Mr St John-Stevens made no personal reference to Dr Boyson, he made it clear that although he would expect individual schools to publish exam results, league tables were not part of official Conservative policy.

"What at first sight may look like like achievement may be the reverse in the light of the history of a particular school and a particular area", he said.

The Parliamentary Education Committee had discussed the matter with Conservative leaders of education committees and was in favour of every school publishing a prospectus which set out its approach to education, its teaching methods, its specialities and its achievements, including its exam results.

"We do not favour publication of league tables of results. We want to see the results placed in their appropriate social setting and in the context of the particular school and its problems."

The statement within the party widened the following-day split in the Conservative Party's right wing. Mr St John-Stevens' view was against Mr Boyson's view.

that exam results should be seen in a social context.

Such a view, it said, could mean that children from more prosperous areas could be further back in the queue for higher and further education even though they had better exam results.

A spokesman said it would lead to "a form of social engineering and undesirable egalitarianism which the Conservative Party ought to deplore rather than justify".

Support for Dr Boyson was, however, overshadowed by a number of criticisms, this week.

Mr John Gray, ex-president of the National Union of Teachers, called on Mrs Margaret Thatcher, leader of the Conservative Party, to sack him. At a meeting of the Bishop Auckland and District local association of the National Union of Teachers he said: "I do not expect such an action to silence him, but I do think it would show that she has regard for standards of debate and behaviour and will not tolerate degradation of schools which are doing a good educational job."

Mr Gray, who is head of Goyt Bank Comprehensive School, Stockport, was quick to point out the irony of comparing sets of exam statistics without reference to local conditions.

He recalled that he took up his job in the year Dr Boyson finished as head of Highbury Grove, an inner London comprehensive. That year O-level exam results were relatively poor at Goyt Bank, yet the D-level exam at Highbury Grove was lower even though Dr Boyson never ceased to sing the school's praises.

"To apply Boyson's law to those figures, ignoring as he does all other relevant factors, we can say that in a bad year we were a better school. Are parents expected to be so glib as to accept that type of argument without question?"

Mr John Schaffel, head of Spireley High School, Manchester, which was bottom of the A-level pass list, has invited Dr Boyson to pay a surprise visit to the school "to correct any mistaken views".

Nine of the school's sixth form took A levels this year and there were nine passes.

In a letter to parents Mr Schaffel admits it is nothing to boast about but points out that the school cannot do much about it when most of the pupils leave at 16. The year before, the school had achieved 19 passes at A level.

"I'm not satisfied with our A-level performance", he wrote. "None of the teachers are. There is no conspiracy at Spireley High. But we will never be a leading school at A level until parents are prepared to let their children stay at school and show people like Mr Rhodes Boyson the quality of Manchester children."

Passes at D level were improving, he said, and the school had distinguished itself in the world of music, sport and the arts. Added to this, the school was oversubscribed by parents.

The National Union of Teachers' executive has condemned Dr Boyson for creating "a false and misleading comparison" of the exam results in Manchester. There was equal cause for concern, it said, in the actions of Oxfordshire County Council which has decided to publish a league table of exam results at its schools against the opposition of its teachers and its education committee.

Mr Fred Jarvis, NUT general secretary, wanted teachers now have to review their role in the running of the exam system if they believe the results are being misused. Mrs Shirley Williams, Education Secretary, added her contribution to the debate when she defended the record of comprehensive schools during a speech at Giff's School, Chesham, last Friday. Nearly twice as many school leavers, she said, now got A levels as got them before comprehensive schools were introduced.

There were good and less good schools in the comprehensive system and all educational systems. "More to the point, there are pleasant prosperous neighbourhoods and disadvantaged, inner-city neighbourhoods, and the children from these different areas have widely different chances in life."

"To compare schools without reference to their environment is to make the crudest mistakes."

Mr Peter Navsami, chief officer, said the conventional explanation of differential results was that they were largely determined by the social environment of school and child. "This may be so, but the child is a division such as Green which where the intake of able children was high but results, particularly on A levels, did not seem to compare favourably with divisions with similar intake."

The overall A level pass rate in inner London was lower than in England and Wales, but, in his report to the schools sub-committee, Mr Navsami says: "There is no reason to suppose that the ILEA, the education service, will have cause to be grateful to it. Conversely, it provides no grounds for complacency either."

Mr Robert Vignar, Conservative Opposition spokesman on the ILEA, said he would demand publication of results of individual schools. "Parents have a right to know to help them in their choice of school," he said.



Dr Richard Hoggart: combined degrees the biggest culprit.

## Degrees are 'second rate'

Some of the new liberal arts degrees on offer in no more than second rate higher education, Dr Richard Hoggart, chairman of the Advisory Council for Adult and Continuing Education, says in a paper published by the council last week.

It is sometimes the very people who most assert the importance of universities maintaining their standards who are ready to prescribe the second class for others, Dr Hoggart says.

Some of the degrees now available through institutes of education were approved after relatively cursory inspection and would hardly have passed the normal internal scrutinizing bodies.

Dr Hoggart, Warden of Goldsmiths' College, London, told the TES that what he had in mind were the degrees, particularly in combined rather than single subjects, created by some of the new institutes of higher education.

Provision for people in their mid-20s to mid-30s who had fallen off the educational conveyor belt but now wanted a university training was still quite inadequate. They were looked on dubiously by some university teachers and employers. At their age they were expensive in employment.

"In short, the universities should be looking much more at second-class entrants."

After Expansion: a Time for Diversity, by Richard Hoggart, ASACE, 196 Do Mansford Street, Leicester, 50p.

The big difference was between social and economic groups. More than three-quarters of those in the class households, the lower half of the social hierarchy, were in the lower half of the income groups. Dr Hoggart said that the lower half of the income groups had left full-time education at an earlier age than the upper half. They were concentrated in the lower half of the income groups. They were in the very lowest bracket. While nearly two thirds of the working class were in the lower half of the income groups, only one quarter of the upper class were in the lower half of the income groups.

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## 24,000 still seeking teaching jobs

While more than 80,000 teachers found work in the month nearly 24,000 teachers were still seeking work, according to the National Union of Teachers.

At the same time, Department of Education and Science said that the unemployment rate in the sector of primary and secondary schools was over 31 per cent.

Figures in March showed that teachers who qualified in the last year had still not found jobs in the sector. The DES said that 32,000 teachers qualified in the last year, but only 25,600 of these were seeking work in the sector.

"Therefore, on the basis of the year's employment rate we expect 12,136 to be unemployed at the end of September," the DES said. Added to the March figures, the overall total of unemployed teachers from the DES was 24,000.

Figures from the DES show that 80,000 teachers were employed in Great Britain last August, together with 70,000 in the rest of the world, making a sharp drop in the overall total of unemployed teachers from the DES was 24,000.

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## Hiring and firing starts race row

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The NNEB is responsible for the only professional qualification that crosses the boundaries between health, education and social work. Holders of an NNEB certificate can work in day nurseries, schools and hospitals.

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The immediate cause of the recent crisis was a decision by the RSH that they could no longer house the NNEB. But the roots go back further—notably to a decision in 1974 by the two departments concerned with the NNEB, the DES and DHSS, that they would withdraw as full participants and appoint non-voting "associates".

The board appeared to risk the challenge. It appointed a director of courses, Mrs Barbara Breakell (who had wide experience as a nursery teacher and primary school head), and Mrs Alvin.

Mr Alvin, however, feels the board was turned down because he was a brown skin. He said a meeting of the Anti-Nazi League was held in the week before the board was set up. The board was turned down because he was a brown skin. He said a meeting of the Anti-Nazi League was held in the week before the board was set up.

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Independent inquiry ordered after administrative upheaval. Virginia Makins reports

## Nursery board to call in nanny...

### ARGYLE HOUSE

29-31

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## Punishment no answer to youth crime

by Caroline Haydon

Truancy institutions where young offenders received "short sharp shock" sentences would not help reduce juvenile crime, says a new high-level pressure group.

It claims that comparisons with more constructive systems in prisons, borstals and community homes, show that a tough regime is no more effective than any other. The group wants development of more intermediate treatment, community service and professional fostering schemes.

Five organizations concerned with young offenders—the Association of Directors of Social Services, the British Association of Social Workers, the Conference of Chief

Probation Officers, the National Association for the Care and Reformation of Offenders and the National Association of Probation Officers—were joined forces in campaigning for a new approach to juvenile crime.

In a statement of aims issued this week they say that present methods of dealing with juvenile crime are ineffective and costly. Borstals, detention centres and other institutions have had little success: 73 per cent of young people leaving detention centres and 81 per cent of those leaving borstals are convicted of further offences within two years. Yet it costs £94 a week to keep a young person in a borstal, £96 in a detention centre, and £70 in a community home.

"The number of juveniles found guilty or cautioned for indictable offences has increased threefold over the last 20 years," says the statement. "The public is rightly anxious about the situation and we share their anxiety."

There should be a limited number of well-staffed secure places for young people who need to be locked up to protect the public or themselves.

But, the group says, it is easy to exaggerate the number of such children. Most young offenders should be dealt with in the community by the community.

At a London press conference to launch the campaign Baroness Falkland, chairman of the group,

said that juvenile crime was an emotive subject in which people tended to react without consideration of facts.

"There tend to be two schools of thought—those who maintain that delinquents should be dealt with on a cure and compassion basis, and those who consider that the method used should be based on punishment, retribution and isolation from society."

"The polarization of these two approaches is unfortunate. Care and compassion are compatible with a policy of law and order."

Day care for children combined with close work with their families was the answer for most young offenders and should be supported by all political parties.

## Team of 18 for maths inquiry

Mr Hugh Scanlon, the president of the Association of Engineering and Technology, has been appointed a member of the Committee of Inquiry into the Teaching of Mathematics in Primary and Secondary Schools in England and Wales.

Mrs Shirley Williams, the Education Secretary, announced the appointment of the 18-strong committee this week. The chairman was Dr W. H. Cockcroft, Vice-Chancellor of the New University of Ulster. Other members are:

Mr A. G. Ahmed, head of department, Fairfields High School, Addington, Croydon; Prof. M. F. Atiyah, Royal Research Professor, Mathematics, Institute, Oxford; Miss K. Q. head of mathematics department, Accrington and Rossendale College of Further Education, Accrington; Mr C. David, head of Oxford Comprehensive School, Port Talbot; Mr G. Davies, Central Unit, Prime Minister's Office; K. I. Dennis, teacher, County Junior School, Abingdon, Oxford; Mr T. Eastwood, head of mathematics department, Lonsdale College of Higher Education, Derby; Mr R. P. chief education officer, Hampshire County Council; Mr J. H. Hughes, executive director of Mathematics Project, Hughes, head of Vardar School, Birmingham.

Mr A. J. McInnes, adviser in mathematics, Shire County Council; Mr J. lecturer in mathematics, University; Miss H. principal, Homerton College, Cambridge; Dr P. G. Wakeham, managing director, National Engineering Development Council; Mr D. Webster, chairman of education committee, Harrogate Tyne.

The eighteenth member, to be named later, is a student. The committee will give their report to the Education Secretary in further and final recommendations, and will also make recommendations to the House of Commons Education Committee on the future of the School Leaver.

Further studies or no dole: plan for leavers

All who leave school at 16 are encouraged to undertake studies—or lose their social benefits, according to the plan of the Department of Education.

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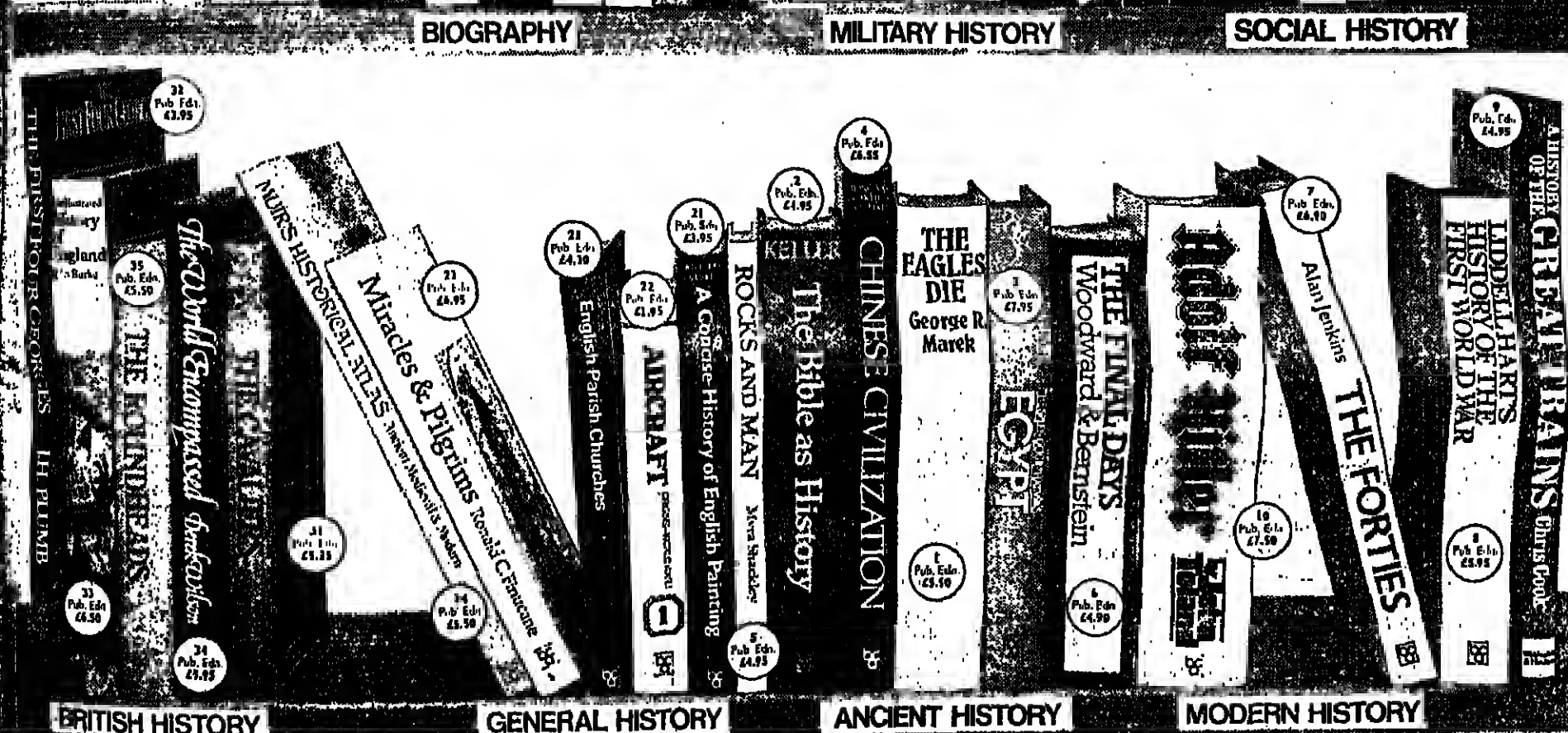
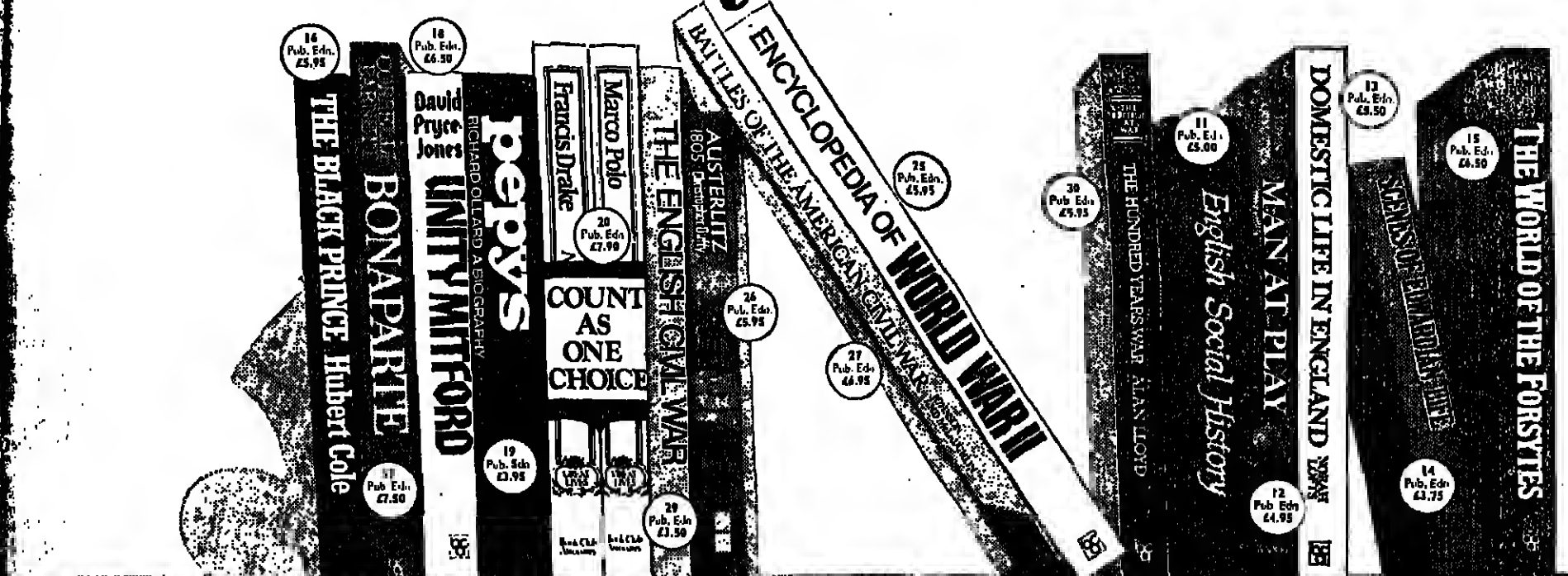
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## Great savings from cash back offer...

Nearly 350 schools in Derbyshire are in line for a share of a £52,500 cash hand-out as a reward for saving energy.

Derbyshire County Council pioneered a closely monitored fuel economy drive in schools a year ago with an incentive scheme to help cut down the county's massive £3.5m bill for heat, light and power in buildings.

All education premises were issued with a special handbook giving advice about ways of saving energy, which in turn helped them save money.

Over the seven months of the scheme's operation, the schools have managed to save £124,731.

Each school at the beginning of the year was given a "target energy consumption" based on the amount of fuel or power it had used in the past. Schools were told they would receive back 75 per cent of their savings in cash if they managed to make savings above the target.

Of the 373 schools taking part, almost 300 managed to achieve savings of more than five



## Bob Doe at the National Association of Inspectors and Educational Advisers annual conference

### Basic skills only a means to an end, advisers warned

Warnings about a mindless stampede back to basics and the dangers of an educational diet of "convenience foods" were voiced by Mr Eric Hulland, president of the National Association of Inspectors and Educational Advisers, this week.

New teaching devices and ready-made curricula could mean that education would be overruled by the same force as the mass-produced environment we live in, he told the association's annual conference in Coventry.

To avoid this kind of mediocrity we needed a blend of old and new methods "based on the bedrock of the interaction of minds".

Mr Hulland, who is the assistant education officer in Sheffield responsible for advisers, said education must concentrate on personal development and the prospect of increased leisure. Public clamour about standards should not lead to over-concentration on those parts

of the curriculum that were unsatisfactory.

Tasting by the Government's Assessment of Performance Unit would be "abortive, deadening and reactionary" if it did not cover the whole of the work done in schools.

The three Rs were a means not an end in a full life. The future faced by pupils might not be very clear, but it would not be the kind of life exemplified by Bob Cratchett.

"We should not allow ourselves to be manoeuvred into a mindless stampede back to basics and nothing but the basics," Schools had to help overcome the stigma of unemployment.

Advisers would need to maintain the morale of teachers, too, as falling rolls led to fewer senior posts. They would need help to come to terms with their frustration.

Schools are poised for a triumphal rise in standards, said "Vogel", the economist. "The hubbub about falling standards is taking place after the event. This particular stable dour has already been bolted."

Comprehensives would soon be popular again; "there is no need to waste breath on that issue". With falling rolls, stable staffs and adequate buildings schools would be under less stress than at any time since 1938.

He catalogued the physical achievements of education in the past 20 years: five out of six children in new or remodelled schools, the leaving age raised twice, more children staying on, higher education multiplied by 10 and teacher numbers by three.

During the next 20 years, he said, schools would achieve an intellectual triumph of the same magnitude. He expected some kind of agreed, common syllabus for most ordinary children. He took "an increasingly conservative stance" on what that should be like.

"I expect schools to stand for values, discipline, knowledge and learning," he said. By acting as social missionaries teachers had got their roles muddled and added to the low esteem much education was now held in.

"We have asked too much intellectually and socially of teachers who are only very average and ordinary people."

Schools should not deny the differences of children from different backgrounds, he said. They should not deny the differences of children from different backgrounds, he said. They should not deny the differences of children from different backgrounds, he said.

Education, he said, should focus up to the crucial issues of cultural consciousness and identity and concentrate on "onesty rather than consensus".

"I am an Indian with a culture and heritage that needs a permanence and security to my existence. But that culture needs reinforcement if it were to continue to exist. This reinforcement, and young blacks feel like a fish out of water in the cultural diet offered by schools. They often react violently or simply spread out."

The main difficulty of minority groups, he said, was not so much a language. But it was not so easy to disagree with what he said now.

## SPECIAL ANNOUNCEMENTS

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Headmaster, Southbourne School, Ruislip

This course provides thorough training and practice in all procedures necessary for the construction of a secondary school timetable. Previous courses were over-subscribed, and we are again offering three courses in the current year. Early booking is advised.

Bath December 20-22, 1978  
Winchester April 18-20, 1979  
Ruislip July 28-29, 1979

### EXTENDING READING SKILLS

Course Director: Michael Gale, M.A.  
Director of Reading Centre, Digby Stuart College  
Roehampton, London

This course is for primary and secondary teachers seeking to help their pupils read more effectively. It is not about learning to read, it is about reading to learn. It will also be of value to those engaged in further personal study, for example in the Open University.

Bath January 2-4, 1979

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Tel: 01-449 5342

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Open to graduates or three-year trained or two-year trained plus qualification obtained by one year full-time or two years part-time study.  
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Maths: a suitable case for treatment, according to the report.

## Stretch the able and stretch the basics, primaries told

by Rob Doe

Primary teachers work hard to produce pupils who are literate, numerate and well-behaved. HM Inspectors say in their report, *Primary Education in England*. But results vary according to the methods used, the way classes are organized, the locality, the range of work attempted and the help teachers get from more experienced colleagues.

The reading test results were encouraging and supported other findings in the survey that teachers gave a high priority to teaching basic reading skills. Similar importance was given in basic arithmetic, but the results were more disappointing.

On the evidence of this survey teachers in primary schools work hard to ensure that children master the basic techniques of reading and writing. There is little support for any view which considers that those aspects of language are neglected in primary schools in the west. Most of the classes reading schemes and education were used to provide children with material at the right level of difficulty and were used regularly.

But as soon as children have gained some confidence with their reading, the report says, the gradual reading scheme, now heavily used in schools, should be supplemented with other materials. Pupils should be introduced to books which are stimulating and give information, and the use of "reading books". The teaching of such skills did not occur in three-quarters of 11-year-old classes surveyed.

In mathematics, considerable attention was paid to computation, measurement and calculations involving money. But the results observed by the inspectors, and confirmed by the tests, were disappointing.

Of particular concern was pupils' poor understanding of the general rules of arithmetic and inability to apply mathematics to everyday problems. The inspectors also felt that the work was often too easy for children who showed most marked mathematical ability.

Too much reliance on work carried out in front of the blackboard, and a neglect of teaching from their own questions and ideas, were also noted. The inspectors also felt that the teaching of mathematics and other

requires a lively and sustained contact between a teacher and a group of children.

But the survey did not reveal any widespread use of new, informal or what they call "exploratory" teaching methods. Most teachers used a didactic approach "in which the teacher directed the children's work in accordance with relatively specific and predetermined intentions and where explanations were usually, though not always, preceded by the action taken by the children".

Fewer than one in 20 teachers relied mainly on an exploratory approach and three-quarters used a mainly didactic approach. About one fifth used "an appropriate combination of didactic and exploratory methods varying according to the nature of the task".

In only about one class in 20 was there little guidance given in children about what they should be doing.

When this occurred children were uncertain of what was required, this could lead to confusion and lack of progress.

What effect these different approaches have is a matter which teachers using a mixture of methods were also more aware of in matching the pace and of work in children's capabilities according to the inspectors' result was that children from classes scored significantly on the tests of reading and mathematics than did those from where teachers favoured "exploratory" methods. The didactic approach marginally lower mixed methods.

Test scores varied too, to the locality of schools. Schools scored significantly higher in rural and inner city than in class sizes and in two-class sizes and in one-class sizes.

But children in classes of 20 or more were less likely to be given the same level of attention as those in smaller classes.

The inspectors were also concerned about the degree to which more able children are stretched. Teachers

and were given work less suited to their capabilities, than children in classes composed of single age groups.

The inspectors did not, however, find many rural classes with mixed age groups because classes of less than 25 were excluded.

The number of one-roomed classes was small (about one in 100) and the comparison could be made.

There seemed to be no particular benefit from separate or combined primary and junior schools.

Children who covered a wide range of curriculum also did better in the tests of basic English and maths.

"The teaching of skills in mathematics, whether in language or in mathematics, does not produce the best results."

The inspectors identified 36 different common curricular issues in at least 80 per cent of the survey classes. They say, however, that these alone are not sufficient to constitute a common curriculum and they were not happy about the extent of agreement between schools on what the essentials are.

The report says: "When the range of work in more than one subject is considered, fewer than one-fifth of the classes at any age identified items in both English language and mathematics. Moreover, when all the items for all subjects are considered together, then less than a third of the seven-year-old classes, about a fifth of the nine-year-old classes and a quarter of the 11-year-old classes included all the activities. This would seem to suggest that in individual schools either some difficulty is found in covering appropriately the range of work widely regarded by teachers as worthy of inclusion in the curriculum, or that individual schools or teachers are making markedly different decisions about what is to be taught based on their own perceptions and clinics or a combination of these. Clearly ways of providing a more consistent coverage for important aspects of the curriculum need to be examined."

The inspectors were also concerned about the degree to which more able children are stretched. Teachers

## Inspectors criticize standards in all primary subjects except basic numeracy and literacy

chairs in the survey were asked to indicate which of their pupils were more able, average and less able. The inspectors then tried to establish how well the work these children were given matched these abilities.

"In almost all the cases where work was not reasonably matched to children's capabilities, it was insufficiently demanding. It was very rare for children in any age or ability group to be required to undertake work which was too difficult for them. In the case of the most able groups at all three ages the work was considerably less well matched than for the average and less able groups."

Science, it seems, is one of the weakest areas of the primary curriculum. Few schools had appropriate equipment and insufficient attention was given to ensuring proper coverage of key scientific notions. The teaching of processes and skills such as observing, the

formulating of hypotheses, experimenting and recording was often superficial.

Geography and history come in for criticism. Only in half the classes was the work pitched at an appropriate level or pace for the abilities of the children. Four out of five classes offered superficial history involving little more than copying out of reference books.

Often history lessons were fragmented, with children moving from work on Ancient Greeks in "travel in Stuart times", and less classes used atlases, maps or globes.

The inspectors were pleased with some learning that did not appear on the timetable: "The schools in the survey attached particular importance to children acquiring a sense of social responsibility, whether by performing tasks related to the general welfare of the school or class, or through the way work was arranged and carried out in the classroom. In nine out of 10 classes

teachers provided planned opportunities for children to take responsibility and to participate as members of a group or team. The older children particularly were also given opportunities to exercise leadership."

But they are less happy about the way schools help children in notice things and think. "Opportunities for discriminating, classifying and observing interrelations arise in connection with work in all areas of the curriculum. They could be used more fully than they are."

"In art children rarely drew or painted from careful and detailed observation of things around them; accurate and careful measurement and observation were seldom a part of the work in science, craft or social studies. Whether they are working at first-hand or with secondary sources children need help in noticing relevant features and generalizing from their observation."

Inspectors attach particular importance to increasing the numbers and degree of influence of teachers with special responsibilities for parts of the curriculum. They found that where such teachers had strong influence, the work of the more able was considerably better matched to their abilities.

"These findings suggest that where a teacher with a special responsibility is knowledgeable and able to give a strong lead in planning and carrying out a programme of work, this is effective in influencing the work of other teachers in the school. This in turn would appear to raise the levels of expectations of what children are capable of doing, particularly in relation to the most able children, who were often the least likely to be given work which would extend them intellectually."

Teachers with special curricular or organizational responsibilities had a noticeable effect only in a quarter of the schools surveyed. Responsibility for music was recognized in 70 per cent of the schools and for English in half. In two-thirds of schools responsibility for games was more common than English. Special responsibility for science occurred in less than a fifth of the schools, and for art and craft in a third.

On the transition between classes and schools, the inspectors found less than a third of the teachers in primary schools discussed the curriculum with the schools to which these pupils would transfer.

Most class teachers said they discussed pupils with their former class teachers on transfer within the primary school. In half the seven-year-old classes and four-fifths of the nine and 11-year-old classes standardized tests were used to monitor children's progress.

A further major HMI survey on secondary schooling is expected to report next year. Primary inspectors have also just begun a survey of first schools, which were excluded from the main primary survey, and nine out of 10 schools is expected to start this year.



Reading: satisfactory, but too easy for the more able.

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In 1974 a seemingly rather ordinary pamphlet called *Right to Read*, by the British Association of Settlements, broke some disturbing news. An astounding 2 million adults, it said, needed help with reading, writing and spelling.

It was hardly credible and it took some time for the shock to be driven. They began a mobilization of forces which led to one of the most exciting and innovative campaigns the education world has seen—the Adult Literacy Campaign.

The history of the adult literacy campaign is reviewed in two booklets published this week, *Adult Literacy—A study of its impact*, produced by the National Institute of Adult Education, and *Adult Literacy in 1977/78*, a report by the body set up to organize the campaign and dispense government cash, the Adult Literacy Resource Agency (Alra).

Many teachers were involved in the campaign. When appeals for volunteers went out, it was mainly young, educated women who responded.

In some cases they faced more than they expected. As one re-

ported of a student "he has tried to commit suicide twice because of illiteracy. It is fantastic the things he goes up to to hide it. How he has managed to build up his business I don't know."

But not all students had such extreme problems, and tutors were often surprised to find how "normal" a student was.

But why had the education system failed them? The reasons given varied from illness and frequent change of school or plain dislike of school to a vague "just got behind—never caught up."

Some students blamed their schools, very few blamed their parents. Normally they attributed their lack of progress to their own inadequacy, laziness, the lack of understanding on the part of teachers, or broken schooling.

What was striking about all the recollections of school, however, was the common belief of students that if they had been given some

## Lessons from literacy



by Caroline Haydon

individual attention at school all would have been well.

But there was another jolt for teachers—the problems were not all in the past. "One embarrassing consequence of the success of the Adult Literacy Project is that the BBC is receiving and passing on to L.A.S. telephone calls from pupils still at school, and letters from their parents, asking for help which they cannot get in school."

It advocated abandoning methods that did not work and trying new ones—setting up one-to-one pairs in schools using parents and sixth-formers. One school even adapted a redundant caretaker's house as a reading centre.

Alra concludes that literacy skills need to be checked on throughout the school career.

It calls for a great deal more attention to be given to literacy in the training of primary, secondary and further education staff, as well as those in the industrial training field.

This last is an important point. Under the campaign at least 125,000 adults have received tuition in the last three years. All L.A.S. now offer individual and group tuition for those with reading and writing difficulties. They and voluntary organizations now provide for some 70,000 students a year—in 1974 the figure was only 5,000.

Now some 30,000 to 40,000 students are coming forward each year, remarkable success for a campaign mounted on a time of cutting back and little optimism about education circles.

But it still falls short of "target" figure of 2,000,000. It is still a need for a continuing offensive on adult literacy. Alra believes that a large part of that offensive must be based on the vocational training field.

For many, and particularly 19-year-olds, it says, literacy need to be imparted as a part of the teaching of vocational skills and Alra has urged the power Services Committee to include adult literacy in their training programmes without success.

With the publication of just one report, Alra backs the field, leaving the L.A.S. to do the rest. The L.A.S. until 1980, to continue an adult literacy. The Alra that there is still much to be done. Adult Literacy in 1977/78 £1.75.



Usha Rai

Usha Rai, of the Times of India, looks at a black workshop scheme in Notting-

## Training with pride under the Westway flyover

A workshop scheme to train young, unemployed black people of Notting Hill, London, in such skills as motor mechanics, engineering, woodwork, electronics and welding was opened officially this month, two years after it was initiated.

The idea for the workshops came from a small group of West Indian skilled men as a positive response to the problems facing their children in an area where 50-60 per cent of young people are unemployed and many constantly run into trouble with the law.

Money for the scheme came from several sources. There were grants from the Gulbenkian Trust and from the British Council of

Churches, the Society of St Vincent de Paul and Cordinal Hume, and an appeal in the Catholic Herald brought in considerable aid.

Ten unemployed youths were engaged to build the workshops. None of them had worked on a building site before but the fact that they were working on a project for "their own kind" gave them added incentive.

One of the young men who worked on the project, under the Westway flyover at North Kensington, says with pride "A lot of people thought we could not do it but we have. Also all 10 of us have just completed a year at major colleges. We now have a sense of achievement, a self awareness and respect, knowing we have participated in our future."

Over £35,000 has been invested in the project so far and the workshops are recruiting the first batch of 65 young people for the year's general training. The training will be conducted with the help of the Manpower Services Commission and the general instruction will be rounded off with special training in a chosen skill. The recruits, aged 16 to 18 can either go on to further training or look for employment after finishing the course. Though the craft training workshop was originally the idea of the Teamwork Training Scheme it soon found the Community Action Centre, an umbrella community group, seeking its assistance in setting up its own embryo building workshop project. While Team-

work was setting up a unit for training in motor mechanics, welding, paint spraying and beating, the CAC wanted workshops for training in work and electronic trades and adjoining plot work on the workshop was begun.

Initially the state received a lot of sympathy and financial support. The first official breakthrough came in September, 1976, when the Job Creation Programme granted the project wages for 10 young people and two supervisors for six months to build their own workshop.

Early this year the CAC Teamwork projects decided to gain in order to reduce head costs and to give each some experience of all the



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## Think Tank prescription for the nurseries

The Government Think Tank last week recommended major expenditure and changes of emphasis in services for children of working mothers.

The two main findings of the study are that:

(a) In Great Britain there are some 900,000 children under five whose mothers have a job; the Government provides or controls full and part-time day care for about 120,000 children in day nurseries and with child minders. There are a further 23m children between the ages of five and 10 whose mothers work and for whom virtually no provision is made outside school hours.

Such services as there are involve a wasteful use of resources by providing a service which is expensive per capita and yet is aimed at dealing with only a part of the needs of the children concerned.

The main recommendation is that the two major services for young children: day nurseries and nursery education should be reorganized so that both institutions meet the needs of the children concerned for education and care rather than maintaining the existing divisions.

The objective is to provide young families with a reasonably coordinated service of care, education and recreation. Some kind of order and equity out of the ad hoc service provided at the moment.

Some of the extra money necessary to improve the service for young children and their parents could be found by reorganizing priorities within the education budget to ensure that young children receive greater recognition of their needs.

For example, if half the additional money which this report proposes would be spent on services for young children, it would be found from existing education expenditure. It would involve a reorganization of priorities within the programme of higher education. The fact that the money would be found within the education budget would make it easier to use than money from other sources. The service would be a planned, coordinated and planned

by both central and local government; but this means that long-term planning should be a matter of urgency. A certain amount of expenditure can be done without major expenditure by improving administrative arrangements, making more imaginative use of existing resources.

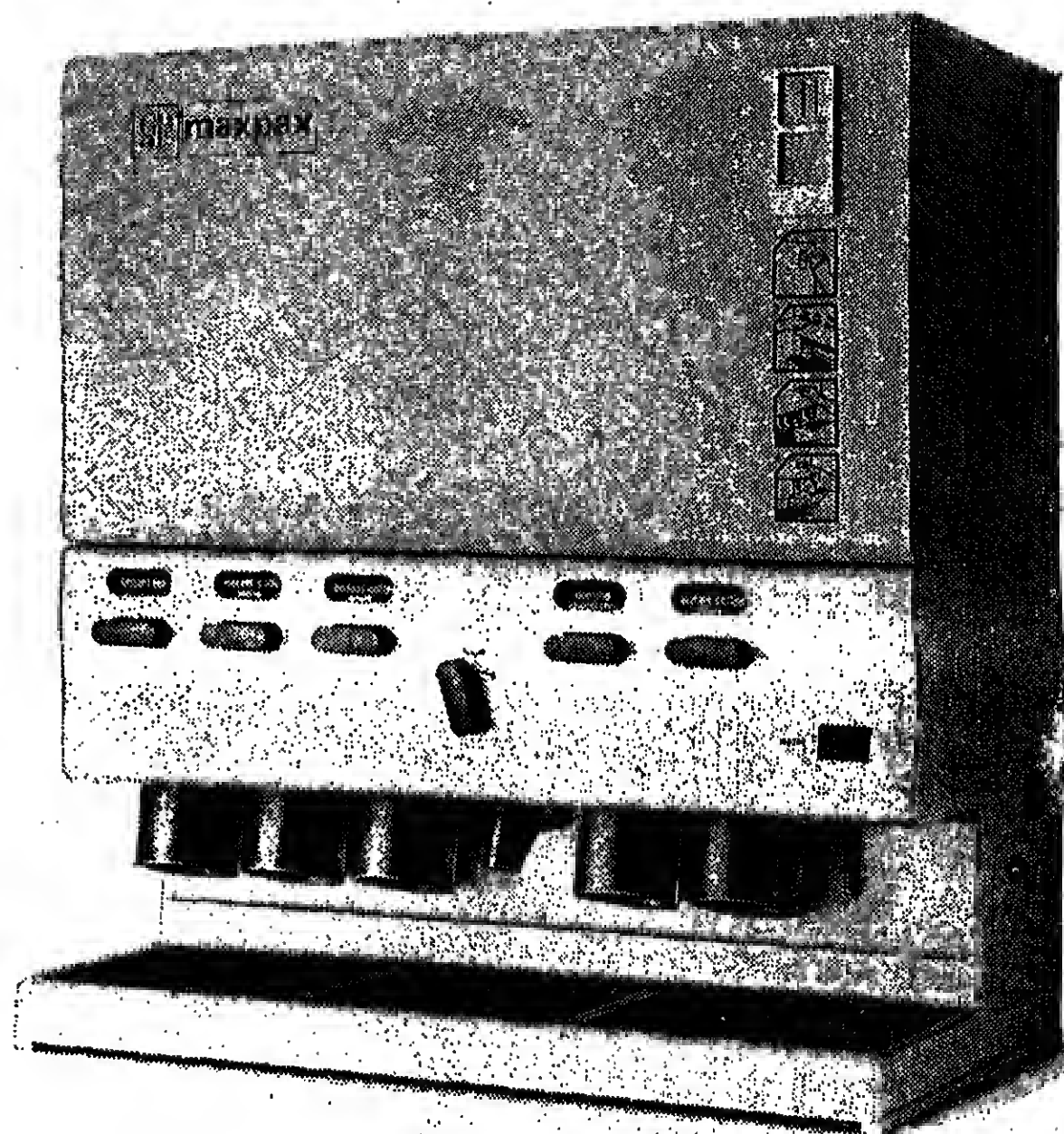
However, a reasonable estimate of the cost of the new service over a period of years is an expansion to take place in the way. The type of expansion we have proposed has a very low cost in the Urban Programme.

The organizational changes have proposed for central government are perhaps the most difficult to implement. We have suggested a unified policy group, coordinating departmental boundaries, choosing links with the departments traditionally involved in child care and with ministerial oversight. Both main departments, we think, that this is, at best, an ad hoc device for coping with existing unsatisfactory arrangements.

It is in no sense a precursor of the "Ministry of Children". We do not consider such a Ministry could play a positive role in the development of child care. It would be a precursor of a new function. We are not suggesting a new department, but a special grant as a component of the special grant to the policy group to ensure that the service is properly developed from the start. The long-term future of both financing and provision of both financing and provision would be best considered in a separate programme has been under consideration for several years.

One of the most important elements of the new service would be that local authorities should be flexible in their use of resources that they may need in the community and kind of advice and help provided. There would be a set of common standards which local authorities would be expected to meet.

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## School to work

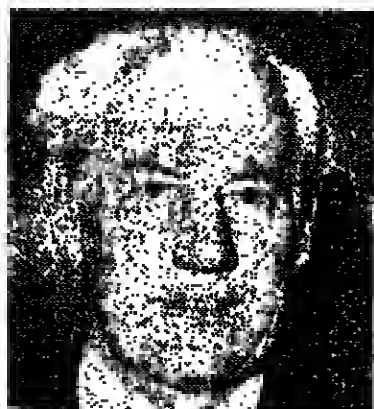
### East meets west on training

Top bureaucrats from behind the iron curtain will come to London next week to discuss with Western civil servants how they can help and train their successors. It is Britain's turn to organize the annual international conference on the development and training of senior civil servants.

Poland, Hungary, and Rumania are among the 25 countries sending representatives, who will talk about the problems of recruiting, identifying, and training those "who are, or are destined to become, higher civil servants".

The conference will explore the influence of national traditions and practice in training and education on civil service organizations, and the way the structure of such service influences its training.

Lord Peart, the Lord Privy Seal, will welcome the representatives, who will be addressed by Lord Cribb, former head of the home civil service.



Sir David Orr: trained people are the resource in shortest supply

### Boards' future depends on finding a role

The industrial training boards have now virtually worked themselves out of a job, Unilever's chairman, Sir David Orr, told the annual conference of the British Association for Commercial and Industrial Education in Cambridge.

The boards had been successful that there was little mileage left in the system of levy exemption, he said. There might now be a new role for them in manpower planning.

"We are waiting to see what proposals such makes in the Manpower Services Commission. The outcome will determine what role, if any, the ITBs have in the future," said Sir David.

Sir David's remarks are in some ways in line with views already expressed at an earlier BACIE conference by its TUC, which sees the new national training system as a last chance for the boards to justify their continued existence.

The boards are submitting their individual plans for tackling continuing skill shortages in their industries to the commission. In Unilever, said Sir David, trained people were regarded as the resource in shortest supply. He estimated that this year the company would spend, worldwide, about £10m on training—more than it had ever invested in a capital project.

In Britain, Unilever is spending about £20m, nearly £14m of it on non-management training.

### Unions join in industry education

Trade union officials and employers are to be sent to a new conference on industry education, which will be held in London next week.

Worried by the realization that the unions have left industry education largely to the employers, the Trades Union Congress made catching up with them a priority for its expanded education department. It believes that the unions are not doing enough to ensure that young people have a balanced picture of industry and that the scope of education is restricted to the concern of employers.

The education department has already begun a survey of the views of the 40 or so organizations concerned with industry education in order to check reports that of them appear deliberately steering schools towards limited training.

The next few months the department will produce a range of briefing material for teachers, and then set up a series of seminars throughout the country.

At the same time, the TUC is stepping up its preparation of a manual on curriculum design for the Schools Council project, which it sees as the most valuable contribution towards preparing young people for work in the long term. To ensure young people learn to work, the manual will encourage trade unionists to take part in running and assessing work experience schemes.

Reports by Mark Jacob

## We are all a bit dyslexic, psychologist says

by Diane Spencer

Educationists must not be divided on the issue of dyslexia, Mr Tom Crewe, an educational psychologist, told the National Association of Remedial Education annual conference in Bath last week. When asked to agree or disagree with the statement "Dyslexia is not a learning difficulty but a learning style", he said: "We are all dyslexic to some extent, but dyslexics have more of it and it lasts longer."

"What they need is superior teaching. The label 'dyslexic' pinned to a child can result in the teacher absolving herself of her prime responsibility to pass on reading skills."

"It could be that, nowadays, we teach children badly, and unlike doctors, who bury their mistakes, we simply call badly taught children dyslexic."

"We have not emphasized the importance of teaching reading daily in infant schools, and we have neglected to teach teachers how to teach reading."

"While they have been busy pursuing projects with paper maché, teachers have been unaware that a child who does not learn to read by the age of eight, may well be at risk of failure throughout his school career."

Mr Crewe said he was concerned with the quality of remedial teaching and not the format of teaching or of repetition and drill. "The Department of Education and Science, he said, would soon be asked to decide on a policy for dyslexics. A powerful lobby was building up on their behalf."

Local authorities did not have the resources to give children the individual attention or special classes they could get if they went to boarding schools, which have special units for dyslexics. Ultimately, the answer lay in the quality of teaching. This would mean more in-service training.

A call for better foreign language teaching was made by the new president of the association, Mr Ted Rowe. Language teaching in secondary schools had low prestige and it was not far from academic, he said. Teaching should begin

early in primary school. We should invite more foreign teachers into our schools and encourage staff exchanges.

NARE should be concerned with any area of the curriculum which it considered needed improvement in order to allow pupils to achieve their full potential, and language teaching was in dire need of improvement.

England was far behind in training students in an international or even a European outlook. This was especially true in training future business executives. We should follow the example of the French who had recently opened 30 business schools designed to exploit new markets. Students are given crash courses in a foreign language and the chance to work in a foreign company.

Industry in Britain was begging for such people. "It is not me to meet this demand. The Government is doing nothing to help while student response is feeble. There are links where the quota of places offered is only half filled. The common reason is the lack of language, as the student, feeling his ignorance, is reluctant to make a fool of himself."

A blueprint for a model of the perfect remedial teacher was given to the conference by Mr Charles Gains, senior lecturer in education at Regent College, Ormskirk, and vice-president of NARE. "We will not get this 'super teacher' on a scale 2 salary," he added.

Remedial education had grown up in a haphazard way, generally in response to a local need or because of the enthusiasm of an administrator. As a result, job definitions varied widely, as did status and conditions. Mr Gains's 10-point description included: responsibility for supervising, counselling, assessing, diagnosing specific learning difficulties, advising colleagues on remedial work across the curriculum and liaising with parents and outside agencies such as the medical and education welfare services.

Mr Gains said that teachers should have some training in identifying the skills a child needed to survive as well as being specialists in a particular subject.

## Grammar school plus bread and water equals comprehensive?

The move to a fully comprehensive education system is slowing down, and many schools are comprehensive in name only, according to the National Union of Teachers' education secretary.

Mrs Sarah Harris, head of first year at Islington Green School, London, says in an article that the 1976 Education Act was not a step towards comprehensive education, but a step towards a grammar school plus bread and water.

The battle for comprehensive education is now being fought on two fronts: on the one hand, the ability to select on the basis of ability at 11-plus; on the other, the struggle to create a truly comprehensive system within the comprehensive schools.

At the start of the year only 32 local authorities out of 104 were 11-plus free, compared with 26 in 1976. Of the rest, 38 were still in the process of becoming 11-plus free, for a late start in the year.

From the Department of Education and Science, Mrs Shirley Williams, the Education Secretary, expected about 54 local authorities to be fully comprehensive by 1980 and was confident that the battle for comprehensive education was largely over.

It is difficult either to regard this figure as satisfactory or to share her optimism. Mrs Harris says: "It is inevitable that the rate at which selection is ended must slow down as only the most resistant authorities are left."

Mr Harris says: "The Conservative parliament will remove any pressure to develop comprehensive schools."

The 1976 Act was weak, ineffective and defined comprehensives in a narrow, negative way. "Progress towards a non-selective system has not noticeably speeded up and in an uncertain political environment is unlikely to do so."

The 1976 Act was weak, ineffective and defined comprehensives in a narrow, negative way. "Progress towards a non-selective system has not noticeably speeded up and in an uncertain political environment is unlikely to do so."

## Radical help for 16-18s urged

The decline of the school population provides a unique opportunity for radical reform of education for 16 to 18-year-olds, to reduce class sizes and increase the numbers in voluntary schools, according to the National Union of Teachers' education secretary.

The present arrangements for 16 to 18-year-olds are a "national scandal", says the education secretary, Professor David Gifford, and Naretta Whitehead. They call for a radical plan to bring the age 16 to 18 age group under educational guidance and a comprehensive education system for all.

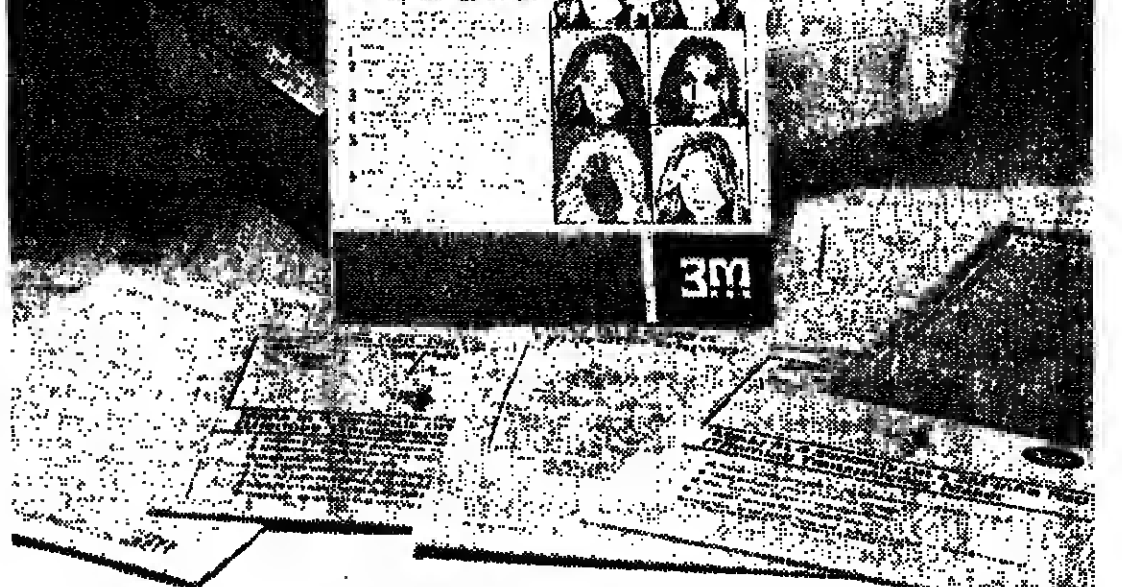
By converting existing primary schools and retraining teachers to teach 16 to 18-year-olds, the number of children in compulsory school age.

These two steps would bring an extra 750,000 into schools, considerably offsetting the estimated decline in the numbers of children of compulsory school age.

The editors want a maximum class size of 25 in both primary and secondary schools.

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## by Deborah Greig

of course.

It is the job of the council's 214 moderators, "our watchdogs" on standards, to coordinate the work of the 100000+ college students three times a year, end providing a vital link with the centre. Most of the moderators started last January and work on a part-time basis. But a new part scheme with full-time moderators is likely to be set up on the basis of performance so far. The DES monitors standards too, via assessors on the council itself and its two standing committees, and by having HM inspectors on all the sector end programme committees.

"We are getting all the support we could expect from the DES", says Mr. Hurrett. But one suspects that initial funding by Exchequer grant to help mass TEC's retol and expenditure of £1m may not be the best arrangement. The task of launching a radical reform requires a great deal of initial development work. The development

students may find themselves working at a vacuum.

One of the most urgent jobs is to get the system into full operation he says: "It will take until 1982 to get all the courses, all the colleges, and all the students in the College system." The Government involved in technician education when we began was 500, but this has risen to around 600 since we took over art and design. And we now have well over a quarter of a million students.

With a full-time staff of 45 at the TEC's Portland Place headquarters - of whom only about 15 can be said to be wholly devoted to development and professional work - it is hard to see how the council need all the continuing support from colleges, ITBs, industry end has that has enabled its first year's groundwork to put technician education on a new footing.

\* Getting a Trade by A. C. Ryrie and A. D. Weir, published by Hodder and Stoughton for the Scottish



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## Sport

### Boost for primary footballers

by Stanley Levenson

Twenty-four primary schoolboys  
will have the rare thrill of play-  
ing football on Wembley's famous  
green just next June—the celebra-  
tion of a six-sided tournament  
launched last week by the English  
Schools' Football Association with  
a three year sponsorship of £20,000  
from the Smiths Food Group.

The four teams which reach the  
finals through a pyramid of competi-  
tive matches will walk away from  
Wembley with a new strip for each  
of the boys provided by Smiths,  
plus medals for the two finalists  
and a cup for the winners.

Mr Child, chairman of the  
association and head of Selwyn  
Junior School, Highgate Park, Lon-  
don, estimates that there could be  
as many as 100,000 nine to 11-year-  
olds eager to have the chance of  
going to Wembley to play football.  
This is the dream of every foot-  
baller, however young or old, said  
John Hollins, of Queen's Park Run-  
ners, who has himself played there.

Mr Child, in giving details of  
the new venture, emphasized that  
the schools association was con-  
cerned with the whole wellbeing  
of boys, moral, educational and  
physical, in which football played  
a part. Fun and sportsmanship  
were key objectives.

Competitive football is much  
more than a drive for points and



For the winners: The trophy is held by John Hollins and Alan...

Loys, says that about 60 per  
cent of the annual sales of the  
crisps and suchlike are given  
to children.  
The association's outlook—foot-  
ball is for boys not boys for foot-  
ball—guided their acceptance of  
the Smiths' sponsorship. John  
Rehman, head of Daventry Junior  
School, co-Durham, who chairs the  
sponsorship committee, said that  
too many boys were only interested  
in using children as marketing fol-  
der. This was not the case with  
Smiths.  
Smiths' marketing chief, Philip

### Stars of tennis world



Cheque notes: Peter Hannon and Jane Gasser.

Peter Hannon, the Irish champion  
from Dundalk, and Jane Gasser,  
Scottish champion Murray Currie,  
6-2, 6-1.  
Miss Gasser took the girls' prize  
with a 6-2, 6-0 success against  
Daphne Boothman, 15, George's  
School, Edinburgh after disposing  
of Welsh rival Jane Hommer  
(Llanilloed Pwll School, Cardiff),  
6-0, 6-3.  
Miss Boothman had earlier  
defeated Laura Roche (Macon  
Anville Convent, Dublin) 6-4, 7-6.  
Like Smith, Miss Gasser came  
straight from the Nestlé English  
final where she had beaten Tina  
Sowyer (Loughlin High School,  
Essex), 6-1, 6-4.

### Shaping the ideas and actions of the young

Teachers, coaches and athletes—  
and political debaters—will find  
much valuable and stimulating  
material in a book from East Ger-  
many which is now available in an  
English version for the first time.  
Most of the volume is devoted  
to detailed advice on athletic tech-  
niques based on the experienced  
accumulated over a decade by East  
Germany's sports scientists and doc-  
tors, coaches and athletes, whose  
performance have gained so many  
honours at international level.  
The detail is such that there are  
special sections on women athletes  
dealing with menstruation, contra-  
ception, pregnancy and abortion.  
What will provide discussion  
that this book is a work of education  
makes two things clear. One is that  
athletics is part of the education  
process of producing healthy indi-  
viduals and shaping such qualities  
as courage, resoluteness, will-  
power, perseverance, self discipline,  
fairness, team spirit.  
The second is that "In the Ger-  
man Democratic Republic track and  
field athletics are an instrument of  
socialist education." Further on the  
book the ideological foundation of edu-  
cation and instruction in track and  
field is more along these lines  
and whether or not it is acceptable  
depends on the individual's outlook.  
In our more liberal Western world,  
sport has always been part of so-  
cialisation process, a rather  
unsubtle one. Pierre de Coubertin,  
the Frenchman, and Matthew Arnold,  
the Englishman, Christians, all saw  
sport as a means of shaping the

### Young adults 'in danger'

The importance of regular  
exercise by young people was  
highlighted last week when the  
for All-Come Alive (Burscough)  
was launched by the Sports  
Council.

The medical-scientific basis  
of this campaign is the fact  
that Professor Peter Fentem,  
John Basset, of the University  
Nottingham Medical School,  
exercise and health.

Their Cause for Exercise  
It is suggested that adoles-  
cent and young adults are in danger  
of becoming a sedentary  
society, of becoming so sedentary  
that their capacity for physical  
activity declines to very low levels.  
Moreover, they are likely to  
become obese.

"Parents and schools have an  
important role to play in foster-  
ing positive attitudes to exercise in  
young people and not merely  
sporting elite in the hope that  
lifestyles which are sedentary  
only will last into maturity."

Chief education officers  
physical education advisers or  
get the Come Alive message  
and publicly material which  
jogging, swimming, cycling  
and other sports.

At the same time Dr Dick  
chairman of the Sports Council  
called on the Government to  
more money into the provision  
sport with the long-term  
Health Service bill.

## United States

### Controversial report criticizes federal literacy programmes

Clive Cookson

WASHINGTON  
United States government is  
studied (whose funding ranged  
from \$10,000 to hundreds of thou-  
sands of dollars) did include some  
successes, there was an consistent  
relationship between success and  
the type or level of federal support.  
"The guidelines and management  
strategies of the federal change  
agent programmes were simply  
overlaid upon local characteris-  
tics," Rand found.

This key finding—that the effects  
of federal intervention are swamped  
by local differences between  
school systems—has come out of  
other American studies too. For  
example, the gargantuan eight-year,  
\$30m evaluation of the Follow  
Through programme, released last  
year (TES December 9), was almost  
useless because of the tremendous  
local variations: all of the differ-  
ent educational approaches used  
succeeded at some schools and  
failed at others, and few useful con-  
clusions could be drawn about their  
overall effectiveness.

The way school districts used the  
grants is described as "spotty".  
Many projects were "opportunistic";  
they were started "simply  
for the purpose of receiving federal  
bargains" without any real inten-  
tion of dealing with local problems  
they were poorly implemented and  
they disappeared as soon as the  
last cheque from Washington had  
been cashed.

But the Rand Corporation does  
not want to give the impression that  
"federal money doesn't matter" or  
to argue for less government spend-  
ing on education. Rather, it hopes  
to change Washington's approach to  
education projects.

Federal policy has until now been  
based largely on an misguided "re-  
search and development" policy of  
view," according to Rand. School

mark  
will have  
little impact?

Colin Narbrough

COPENHAGEN  
mark got into line with most of  
Common Market partners last  
week when a national referendum  
was held in favour of lowering the  
age from 20 to 18.

Experts forecast that the  
age of majority will be lowered to  
16 in an estimated 146,000  
Danes about 4 per cent of  
the population will vote in the  
referendum.

will hardly elicit the party  
constellations, despite  
warnings that the enfran-  
chisement would automatically  
bring in the left. Similar  
movements in other Scandinavian  
countries have not brought signifi-  
cant changes.

total 3.5 million Danes were  
eligible to vote in the referendum,  
only 63.4 per cent turned out.  
A record low for a normally  
highly participatory country. At the  
last referendum on the voting rights  
making big savings in the  
parliamentary vote on the ques-  
tion of the referendum was  
only 54.4 per cent in favour of  
the referendum.

These reflect the value of  
British society, the hereditage  
of a German socialist system  
Neither can be worth debating  
attitudes are worth debating  
These who want only of  
technical advice can start at  
26. Track and field, which  
Gerhardt Schmullens, in-  
books, 87 Gray's Inn Road, Lon-  
don WC1E 6SS. (ISBN 7147 110)

## France

### Minister bent on wooing primary school union

from Our Correspondent

PARIS  
A further step in opening dis-  
cussions between the Minister of  
Education, M Christian Beullac, and  
the following teacher unions was  
taken at a Republican party seminar  
in Nice.

M Beullac once again stressed the  
importance of teacher education as  
the key to the success of the French  
middle school. More particularly,  
the minister seems bent on wooing  
the Communist-dominated primary  
school teachers' union, the Syndicat  
National des Instituteurs.

Since the war, the numbers peo-  
ple entering the education system  
have been growing. This year, how-  
ever, they have dropped for the  
first time. The drop though small—  
in the region of 0.03 per cent in a  
population of 11,000,000—is never-  
theless a sign of things to come.  
Between 1972 and 1974, the birth  
rate fell dramatically and over the  
next decade the falling birth rate  
is bound to have massive reper-  
cussions on education.

Last year the number of pupils  
entering pre-school began to slow  
up. This year's statistics confirm  
the trend: 40,700 fewer pupils  
entered pre-school groups compared  
to 1977.

To some extent, this development  
has been disguised by the massive  
expansion in pre-school education  
regarded as a priority by successive  
Ministries of Education. Currently,  
around 85 per cent of five-year-olds  
are in pre-school classes. The drop  
in the birth rate will hit primary  
schools in 1979-80, work its way  
through to secondary education by  
1984-85 and affect higher education  
around 1990.

Most teachers' unions regard this  
as a heaven-sent opportunity to  
bring about qualitative improve-  
ments in education, better staff,  
student ratio, being the principal  
area.

But this is only one side of the  
problem. The other is the question  
of teacher recruitment. The 20 years  
from 1950 to the early 1970s saw a  
massive expansion in the size of  
the teaching body from around  
66,387 in 1958 to 223,792 in 1974.  
At times, this massive expansion  
reached 20,000 new teachers a year.  
But now, in the secondary sector,  
for instance, no more than 4,227  
teachers have been taken on at the  
start of the new school year.

Demographic projections allied  
with teacher recruitment figures  
suggest that the crisis will reach its  
climax during the five years from  
1985 to 1990.

The implications of this develop-  
ment have been the subject of a  
report to the Economic and Social  
Advisory Council—the main think-  
ing ground between teachers, plan-  
ners and the Ministry of Education.  
Among its suggestions have been  
the creation of additional posts—  
guidance counsellors, school psy-  
chologists, school social workers—in an  
attempt to create other outlets for  
students seeking a teaching post.

M Beullac has nevertheless  
impinged to upset two groups of  
school employees. Strikes by educa-  
tion counsellors and sports teachers  
seriously disrupted the beginning of  
the new school year.

Around half the country's 6,800  
education counsellors, qualified  
staff responsible for administrative  
and supervisory work, went on  
strike for two days.

The counsellors' unions called the  
strike in protest at M Beullac's sus-  
pension of talks on working condi-  
tions.

This sports teachers staged a one-  
day strike to protest at the terms  
of plans announced by M Jean-  
Pierre Solson, Minister for Youth,  
Sports and Leisure, to "relaunch"  
physical education in secondary  
schools.

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- (5) M.Ed. (by examination and dissertation) in Educational Psychology (professional training for educational psychologists).
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Further particulars and application forms may be obtained from the Administrative Officer, Further Professional Studies Division, School of Education, University of Newcastle upon Tyne, St. Thomas' Street, Newcastle upon Tyne, NE1 7RU. Applications should be returned to him not later than November 30th, 1979.

Management and Administration in Education

At least two-thirds of the places on this course will be reserved for applicants from the fields of Technical, Further, Adult and Higher Education. Applications from teachers in other fields will be considered.

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Management and Administration in Education

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# Time for a change?

Mr Newell recently took a look

how Denmark encourages

experimental schools. Overleaf

reports on the pioneering

Wind Schools and on one of the

Danish "little" schools; on this

page he suggests that in Britain

there should be a new form of

direct grant which allows and

encourages local groups to set

up their own schools



Children at the new direct Free School in Liverpool. Should the state support such alternative experiments? Peter Byles

Someone who feels depressed at the slow pace of educational reform should cheer themselves up with a visit to Denmark.

It is refreshing to find not only a state sector committed by legislation to pupil and parent partnership and participation in the schools—symbolized by a pupils' union with a central governing body and 300,000 members—but also a state-supported alternative in which local innovations and initiatives can develop with minimum interference. (Yes, they do check the books, but each group may appoint its inspector someone who is in ideological agreement with them.)

Above all, it is refreshing to find an atmosphere which welcomes experiment in local initiatives, seeing them not as a threat to state control or professional monopoly, but as an inevitable and entirely welcome development of education in a democracy.

While it is exciting to see what Britain (and undoubtedly would) develop if groups of pupils, parents, teachers, and others dissatisfied with existing state school structures, could get together on state funding, it would be possible to simply impose the same legal and financial framework on the same liberating results.

Denmark is a much more homogeneous society than Britain. The more pronounced class and selective nature of our education system, and the dominance of a but undeniably independent sector, support available, with minimal cost, to any group of Danes with 12 or more children who want to "do their own thing" would simply reinforce the nature of our divided system, replacing a significant state-supported and comprehensive system, and replacing the potentially scrambling fortunes of the traditional independent sector.

Any of those who have fought hardest for the comprehensive reform (and time to fight with this "new" idea to put off further reform) would

see this sort of state support for local initiatives, as they have seen vermin of the voucher idea, as a heaven-sent opportunity to delay or dilute still further the non-selective principle.

It is certainly not the purpose of my argument to try to do any of these things (although even if they read to the end, some of the more traditional and defensive members of the comprehensive lobby will not believe me). Why should one want to encourage a new alternative sector of education, state supported but largely internally controlled by the people using and working in the new institutions? Isn't there enough experiment around as it is, what with the Schools Council, new axonisations, curriculum development, community schools, and so on?

All these reforms operate within a rigid and hardly changing structure. It is this structure, which in no way reflects the aspirations of a developing democracy, which needs the impetus of radically different alternative models working alongside it, to encourage freedom of thought.

Where there are differences, where individual heads with the connivance of sympathetic local authorities have planned and put into practice more far-reaching "reforms", they still tend to remain reforms within narrow boundaries and closely defined structures. Many in maintained schools believe that no relevant change is possible except within their institutions, and many of them are clearly trying to work towards an openness and flexibility.

Of course, it is true that the existing administrative and legal framework does not encourage state-supported experiment within a comprehensive, non-fee-paying structure. It is in this right to make relevant, state-supported experiments with different structures which is the Danish tradition. How did it develop? Can it be adapted to meet our different but connected needs?

In Denmark, state support for freedom in education is generally attributed to a nineteenth-century poet and liberal clergyman called Grundtvig, a vigorous opponent of compulsory religious education, especially compulsory religious education. An

early de-schooler, or at least alternative schooler and proponent of life-long or "permanent" education, he described state schools as "schools of death" and "houses of correction".

As well as encouraging the development of a parallel sector allowing the principle of different religions and philosophical beliefs alongside the state schools, he was the founder of the folk high schools, perhaps the most exported Danish educational institutions—residential adult liberal education colleges, with an examination target.

Following Grundtvig's rigorous expression of the principle of freedom in education, schools were founded by different groups—Catholic, Jewish, Seventh Day Adventist, schools for the German-speaking ethnic minority; and Grundtvigian schools, where the emphasis was on talking, discussions and singing, with no rote-learning or drill.

This situation, similar in some ways to the development of the "voluntary" sector in Britain, but with much less government control, either local or national, continued until the 1950s, when new radicals argued for a widening of the definition of freedom: a government which supported schools for those with differing religious and nationalistic feelings should also support schools for those with differing political and social structures of the traditional state schools.

Central acceptance of the logic of this argument has since led to the founding, most often by initially very small groups of parents and teachers, of about 40 "little" (little) schools. Most would acknowledge Dewey and Neill as contributing to their ideology, but (as with the brief rash of urban "free" schools in Britain in the early 1970s), the concept of freedom has developed most recently within general principles of cooperative socialism, with no traditional hierarchy (although Danish little schools are committed to have a leader, at least on paper), democratic meetings, links with local communities and unions, etc.

The most common model for a little school was described by one teacher as a "middle-class, middle-left, teachers' school": it is no coincidence that by far the largest group of little school parents are state school teachers; another sizeable group are in higher education; as teachers or students. There are now

Marxist schools, and a Proletarian Free School, operating with Soviet ideology only on Saturdays and Sundays, with lots of red songs and lessons in urban guerrilla skills.

Most recently, the right-wing authoritarian movement in Europe (which has so far left Scandinavia relatively unscathed) has led to the development of a few of what are termed by the little school people "black schools"—back to rote-learning, rigidly imposed discipline, uniform, little or no sex education. A teacher at the Koga Little School suggested: "If too many of these black schools develop as the right-wing movement moves up from Germany, some of us may well be asking whether our freedom to experiment is worth it."

Politically, the idea of state support with minimal state control has allies in all parties and factions. The principle has never seriously been threatened, although, as the Danes' incredibly high standard of living began to be threatened by economic problems, administrators have been looking at comparative costs in the conventional and alternative sectors.

In a recent report on *The Financing of Private Schools in Denmark*, Lasse Dahlgaard, Chief of the Ministry of Education's economic and statistical division in Copenhagen, wrote: "We feel that one of the prime tasks of the Government is to ensure intellectual freedom, and one way of doing this is to give private initiative and activities the possibility of blossoming in all cultural areas, and in such a way that large groups of the population are not denied these benefits of a free society for economic reasons."

The report shows that the operational cost per pupil to the state in the "alternative" sector for the same age groups averages out at quite a bit less than that in the state schools, although the report suggests that additional income from fees and other private sources make the "private" schools in practice more expensive.

Debate centres on how to ensure that the private sector does not take more than its fair share of "teacher-hours", and on the economy of very small schools. Continued on next page



## continued from previous page

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10-11-68

The Twind windmill—the biggest in the world—under construction.

The Tynd Schools are the most talked

for students aged 18, 19 years and older.

The 1970 Teachers' Pool

an alternative to the conventional high school, Tynd is increasingly popular: there are now four more Tynd-

A black and white photograph showing three people, likely children, sitting on the floor of a room with a thatched roof. They appear to be engaged in a craft or weaving activity. The room has a thatched roof and a thatched wall in the background.

Children at Tynd play outside one of the houses, which has solar energy panels in the roof.

**Bugsvaerd Lille School, on the outskirts**

and teachers have

ing, cooperative and humane. In this

ing company will now appear next week.

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'The Sutton Centre Experiment' continued from page 45.

able grade in the examination. That so much money should have been spent in providing courses for the most able 20 per cent of the population is a national disgrace. That they continue to be used proudly as evidence of forward thinking science teaching indicates the paucity of our critical faculties, or the limited educational area inside the cage defined by the terminal examination system.

In the setting in which these courses evolved, with the most able pupils in grammar schools, and with the expectation of a simply changing society, they were certainly an improvement upon existing schemes, or at least a distillation of what was best in them. In a comprehensive system they are surely not good enough.

Much of the energy of a teacher of conventional science courses is used in organising his laboratory and apparatus so that theft and damage do not occur. He is in pain to make sure that only pupils who can use expensive apparatus.

We argue for more trust, more involvement, more partnership in the process of using scientific techniques to find out about the universe. We have tried this and find that pupils not only have amazing powers of concentration and ability, but also that they exceed expectations in the care of apparatus and the ability to handle safely and carefully even totally novel equipment.

Once teachers are liberated from the responsibility of always being right and knowing the answer, from being guardians of a received body of knowledge, and once pupils do better than know what their teachers know, and so can get genuine satisfaction from their lessons, we achieve cooperation in an enterprise of learning in which the teacher is an equal partner who is really quite useful sometimes.

The situation has several concomitants. The teacher loses his restrictive dignity and acquires status in the eyes of the pupils, discipline problems are largely removed, 2-hour teaching sessions are not always long enough for the pupil (although they are for the staff unless they are able to join in with the excitement).

In five years no child has had to be taken to hospital, the open plan laboratories are in an excellent state of decor, and in both pupils and teachers work hard because they like it. We think that to take people in trust, pupils and teachers, is a vital element in the process of getting the best out of them.

The Sutton Centre policy is to involve all teachers; all have the same workload, all visit the homes of their tutor group, all are involved in curriculum and pastoral work in the house area taken by the Sutton Centre and other schools to make the most of pupils, teachers and the community around.

The Mode 1 exam system requires the teacher to define the syllabus pretty closely. He usually does this by teaching to the class, but in an increasing number of cases he works like a thing dematerialised for several years to produce an individual learning scheme in which experiments, conclusions, apparatus are presented in the necessary degree of detail.

The most admired of such schemes require a child's mind to follow exactly and also, possibly, in addition, to think for itself. The nature of such courses constrains the child's imagination and teaches him that the most profitable course of action lies in following instructions rather than in applying his own powers.

It is a pity that the pupil is not encouraged to work after a period of reflection and of observation about how best to do it, assuming responsibility for it himself. No one sets out to build, decorate, or cultivate without first sitting down to work out a plan.

For such an activity is rarely regarded as work in school laboratories. The pupil is usually requested to get on with his work. This reflection is a necessary part of learning to do it, and only activity is better than the learning process of furious experimentation following a recipe.

More experimentation in less time is regarded as a benefit because a more overcrowded syllabus can be crammed into the two-year course without time for 'why?' or 'to what effect?' The reality is that more syllabus

often means less learning activity, less education. Once the teacher is freed from the responsibility of examining a fairly random selection of facts into the child's mind for an exam, he can enable education to take place. Each child is educated by the thinking processes which he generates in solving problems of various sorts, set either by the teacher or by himself. The class becomes a collection of groups and individuals who can work at their own pace.

There is no difficulty about accommodating children who can hardly read in the fourth year side by side with those already studying for A level. This is demanding on the teacher, but the work is much less stressful and more enjoyable than the conventional teacher's role. In our experience the head is welcomed by the teacher (who in our case teaches for 27 hours a week).

This has consequences for the organisation of schools. Science is yet another subject which is ready

work; individual recording, the group benefits all its members, the more able must explain and justify processes.

The spirit which pervades the lessons is that of Nuffield Science. Pupils are expected to follow the lesson with independent work of various sorts depending upon their ability to do so (a nice decision for the teacher).

After a traditional third year course in integrated science, the course is compulsory, mixed ability, and continuously assessed. Marks are given after each half term topic for experimental design, experimental competence, understanding, recording and recording, background study, and perseverance. These marks are tallied at the end of two years for a CSE grade.

In the fourth year the study topics are electricity, movement, heat, light, sound, and magnetism. There is a wide choice of topics for the pupils to study, covering the TEC level 1 physical science course, which local engineering industry appreciates.

In each half term pupils are given about important topics which should be covered, references are given and apparatus is explained. The pupils work individually or in groups as they wish, they exchange the suggested topics and define the syllabus by the topics which they do.

In addition, pupils may choose to spend a second lesson each week in extra work for extra certificates. Two courses are available, one for further A level preparation and one based towards physical or biological science for those having design or similar aptitudes or special occupations.

So much for the theory. What of the results? Pupils at the Sutton Centre are invited to attend evening teaching lessons each week in science for an extra CSE certificate. Two courses are available, one for further A level preparation and one based towards physical or biological science for those having design or similar aptitudes or special occupations.

At last we could be breeding a generation of managers and workers who speak the same language. If this sounds like fantasy it has been in process at the Sutton Centre for five years to the delight of hundreds of educational visitors. In years 1 and 2 the children are taught to mixed ability classes and the class pursues a topic as a whole for one, two or even three 21 hour lessons. This topic is introduced, explained, suggested, and apparatus explained, all within the first 20 minutes. Then groups within the class take the topic on more or less in the manner suggested, but becoming more divergent towards the end of the lesson.

The class comes together before the end to discuss and summarise actions and discoveries. Then each child individually commits to paper his feelings and thoughts. Group

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The forging of school-industry links is worth the effort and science teachers have both the opportunity and the responsibility

## TAKING THE INITIATIVE

By John Nellist

Where did it all start? Every post, paper and periodical carries news of an attempt to bridge the gap between the world of work and the world of school. As so many issues, this focusing of attention brings a newly fledged idea into the open, though it is not a casual glance beneath the door reveals well-developed and established high fliers.

The demand to match more effectively the teaching in our schools with the requirements and realities of contemporary society is certainly not new. Equally surely, few would dispute that the last 20 years have seen a range of individuals and agencies to do exactly this.

There has, however, been little doubt that the past two years have seen an unprecedented concentration of attention on the 'industry' aspect of the school-society interface. This attention was poignantly sharpened by the Prime Minister's Radio College speech and the ensuing great debate and the economic planning document, which has been widely honed by a range of local conferences and confrontations.

Needless to say, the short-fall in the performance of schools and teachers with regard to the requirements (real or imaginary) of our industrial scene proliferate, and are familiar to most people. None the less, for the science teacher in particular two main strands of the critical review emerge.

To the first of our most able students are attracted to careers in the manufacturing industries. (There may also be something of a shortfall in skilled technicians.)

There is a general lack of appreciation by the population at large, and teachers and young people in particular, of the role of industry in our society and especially in

the place and value of the manufacturing sector. No doubt caveats can, and perhaps should, be raised to hedge both these statements. However, both contain more than a grain of truth. An acute test is to plan the fate of a new, equally surely, few would dispute that the last 20 years have seen a range of individuals and agencies to do exactly this.

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it is clear that a large proportion of the profession must see value in the change. As in all fields there have always been committed individuals making effective gains efforts. The problem is to inform and, perhaps, even convert and enthuse the

It is against this background then, which incidentally discounts industry's problems, that strategies for forging school-industry links must be devised. There are plenty of ideas abroad is not open to question. Money and physical resources are also now much less of a problem. The bulletin of the Schools Information Centre on the Chemical Industry describes school-industry liaison as a 'multi-million pound industry'. It is said that support funds for worthwhile ventures are increasingly available.

The time issue is more difficult. Many teachers have never been slow in support of worthwhile professional developments, and there are signs that a growing number of LEAs and schools are increasingly prepared to release teachers for school-industry work. A little glow and take on both sides work wonders.

At the sharp end of the problem there remains the question of syllabus structure and the related reluctance to take on board yet more change. No doubt, and there are already many signs in the wind, examination content will change, but what of the present?

Experience within my own and an increasing number of other LEAs suggests that it is possible to give existing syllabuses more of an industrial flavour, without abandoning the essential content. This acknowledgement of practical reality

age of funds or other supporting resource can also present problems. However, the most commonly voiced reservations centre round existing examination syllabuses. There is surely little point, the argument runs, in attempting to teach material which may be relevant to the local or national industrial scene but which receives sporadic if any coverage in CSE, O or A level papers.

These and similar constraints must also be read within the present teaching climate. Science teachers have in recent years seen a wide range of curriculum development and innovation and understandably look with suspicion at yet another panacea or demand for change.

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ties also helps to counteract any suggestion that wholesale changes are demanded. The key, now a place of received wisdom, is the local initiative.

Teachers, know their schools, pupils, and teaching syllabuses, and given time and resource they can find out about local industry, make contacts, meet people and hence select that information and those experiences which are relevant to their own teaching. Such efforts may lead to any or many of the activities listed earlier, factory visits, works experience, curriculum support material, industrialists' visits to school or simply a better feel for the world of work.

The important feature is that the selected outcome will be relevant to the teachers' perception of the problem. This end product may or may not be capable of transfer to others but the actual experience for the individual of working in this way is also vital ingredient. Syllabus needs need not be drawn in the flood of industrial bath water, but teaching style and content can be enriched and given a fresh stimulus and another useful breach made in the classroom wall.

In essence then it is my belief that the forging of school-industry links is worth the effort and science teachers have both opportunity, through their subject material, and responsibility in this regard. The climate has never been better, financial resources are getting better, industrialists, just like any other section of the community, are rightly interested in what happens in our schools.

Further, in my experience, most people, from board room to shop floor, want to talk and cooperate with teachers. We are getting beyond the simple position stating which is often turned conferences into confrontations. Look then to the yellow pages, find out about your local factories and firms, don't forget the small ones. You may be rebuffed, but you may very well find much of relevance to your present teaching as well as meeting interesting and interested people.

John Nellist is Science Adviser in the Borough of Sandwell. His views are expressed as his own and not necessarily those of the L.E.A.



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# CATCHING THEM YOUNG

Owen Surridge investigates recent developments in primary science



Making the windmill fit the generator: pupils of Elaine Junior School, Strood, Kent, complete a project

Anxiety about the nation's shortage of scientists, coupled with a lack of interest in things scientific among secondary school children, was bound to set people thinking about changing the underlying attitudes. In an age committed to technological innovation that was inevitable, and the pressure must mount.

So it will come as no surprise that the thrust is now moving strongly towards that cradle of attitudes, the primary school. Catch them young enough, runs the creed, and you can establish the questioning, investigatory attitude for life. So primary school science, as yet the domain of a few pioneers, may become part of the normal scene there within the decade.

That, certainly, is the intention of the "Junior Science" project, a national initiative in primary schools intended for teachers from all 11,845 primary schools during the next six years at a cost of £53,800.

Many primary schools are already teaching some science. Other teachers who would shy away from the notion are doing so, albeit under other headings and without full consciousness of what they are doing.

Mr Alac Sparrow, science adviser to the County of Buckinghamshire, who is carrying out his own campaign to foster primary school science, says: "A lot of teachers tell me 'Oh, I don't know anything about science'. In fact, many of them are already doing it, putting leaves under microscopes or checking out aspects of the environment in scientific style."

The primary teachers of Buckinghamshire are not alone in this and work is by no means always confined to the nature study department. Checking the absorption rate of paper is a fairly common project, as are weathering tests on various points.

Parties visiting castles get to grips with the mechanics of such things as ballista and drawbridges. Groups visit old-fashioned churchyards, where local history has not been

written from. The children learn early that in the matter of observation and recording there is no room for artistic licence. "We insist on accuracy," Mr Ashton told me. "We would not accept a drawing of a ladybird without legs."

Among the projects were investigations of pond life; eyes, optical illusions and the effects of colour; methods of flower pressing; weathering and lichen growth on church walls and a geological survey of local buildings. Results were spelled out with written reports, diagrams, section plots and detailed drawings, all suitably coloured and clearly labelled in professional style.

Naturally Mr Ashton now uses these impressive pieces of work as display pieces, but form a valuable round the classroom. It was clear that they were not just isolated pieces of showmanship. In the hall I found two boys testing the flight efficiency of variously shaped glider wings; one of their tests involved the use of a wind tunnel, which they built with the aid of a teacher.

Another group had devised and built a solar panel for a heating experiment; this, in turn, sparked off work on a solar cooker in another class. The boys had eaten the evidence, but they proudly showed me splashes of burnt sausage fat on the heat reflector as proof of their success.

Elsewhere children were producing an electrically powered test chair, or "seat", there were models of land yachts, all of them raced on completion; a 6ft windmill powering a generator; experiments with hull shapes and water resistance, and a variety of hot air balloon envelopes designed to discover the best ratio of air volume to fuel for lift-off and control.

The school has three microscopes, but though they are on display in the hall, their function is not merely decorative. Children learn to handle them in their first year. In junior school their tutors very often not teachers but youngsters from the fourth year.

Mr Ashton has taken pains to build up a friendly relationship with secondary school science, from whom he borrows her science apparatus as required. He does not overdo this, however, feeling that it is often better to use unorthodox methods to solve problems. He encourages inter-visiting between staff and in homes, soon in junior school their tutors very often not teachers but youngsters from the fourth year.

It is a conviction that young children's abilities to cope with competition and investigation is widely underestimated and he has set out to redress an atmosphere in which the idea of challenging assumptions and checking facts is commonplace.

This applies eye to books. Children are not allowed to get away with copying of printed material. They must make their own checks and some of them have made the invaluable discovery that the authority of print is spurious.

It is assured me this did not mean they could get away with day-dreaming. Projects are expected to yield results, although the youngest may record those in unconventional style, such as the short dramatic episode or art work, rather than

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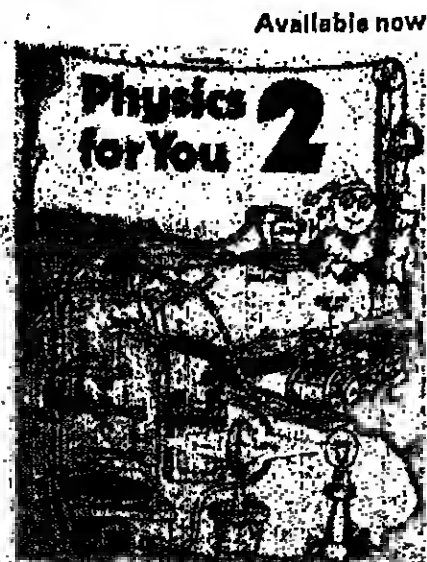
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# LEARNING THROUGH SCIENCE

A Schools Council Science 5/13 Dissemination and Pupil Material Project

Introduced by Roy Richards and Margaret Collis

During the past 20 years much thought has been given to ways of extending primary school children's experience to cater for scientific development. This is one of the natural results of a shift in teachers' concern from what they should teach to how children can be helped to learn and in develop understanding.

It also indicates movement away from the treatment of science as a body of knowledge to a recognition that children should have a good grasp of the methods by which science proceeds, and of the concepts that are intrinsic to this form of knowledge.

In the late 1950s nature study lessons might well have consisted of reading about plants and animals, or, if any, outdoor exploration and children's interest in physical phenomena was usually neglected. At this time teachers were offered ideas for involving their children in practical investigations.

These were organized for the Ministry of Education and materials published by the Association for Science Education, the School Science Society and the Royal Society.

Therefore, when the Nuffield Foundation provided funds for curriculum development in science, there was already interest in using some of these resources for a Junior Science Project. This was established in 1964.

The work which followed, during the next three years, was based on careful observation of children. It showed that their curiosity and readiness to question is aroused by many different situations, at different times in the course of each lesson. Therefore, the best people to encourage the children to develop their own class investigations, and specialist who could only appear at specific times.

The major need emerging from these findings was for a project, designed to help non-specialists to exploit the children's exploratory drives. Science 5/13, the project following Nuffield Junior Science, was sponsored by the Schools' Council, the Nuffield Foundation and the Schools' Education Department.

To this project we owe the most extensive material concerning objectives that children might achieve through their work in science.

When objectives have been formulated it becomes possible to collect ideas for experiences through which children might achieve them. We have been one of the results published in 22 source books for teachers, together with suggestions for organizing the children's work and much background information.

These books and some good commercial publications, now on the shelves, contain no rigid sequences of ideas but leave teachers free to select, in accordance with their children's needs. This involves matching suggestions for experience with different children's intellectual development. A third Schools' Council project, "Learning Through Science", based at the University of London from 1972-77, has resulted in materials for in-service study, designed to help teachers to increase their own expertise in carrying out this process. These have been published under the title "Learning Through Science".

Dissemination of ideas resulting from these three projects has been widespread and the interest of teachers everywhere is evident. It is reasonable to ask whether enough has been done to help primary teachers. School observations and projects have revealed many difficulties, and a wide gap between the provision of ideas and suggestions for practice. The project "Learning Through Science" will

run for two years and the first concern of its team will be to link for ways of bridging the gap mentioned.

The first clue as to what is required for this purpose has been provided by seven advisers and wardens of teachers' centres who have concentrated on giving school-based help to whole staffs. The promising results achieved indicate the need for further school-based efforts.

Since the content of source books can only be related to all children within the age range specified, there is a need for members of primary school staffs to share the labour of making themselves familiar with what exists in such books and then, to cooperate in deciding on the use to which it can be put, in their own schools.

In other words, we have reached the stage when further progress will be made in those schools where the staff, as a team, attempt to formulate and set down on paper a policy for science that they consider most likely to meet the needs of their own children, in conditions provided by their school environment.

A school policy is not a syllabus. It is a plan of campaign devised or amended by the people who will have the responsibility for carrying it out. It must be sufficiently positive to leave teachers in no doubt about what they should be attempting, yet sufficiently flexible to permit plenty of choice and to enable teachers to encourage children to follow up their own ideas, when these promise to be rewarding.

The success of such a staff effort will depend upon good leadership. The head's influence will be vital in creating the school climate which enables all members of staff to enjoy working together and in pupil from the experience. It follows that future developments in science, or in any other area of the primary school curriculum, are likely to be influenced by the quality of training for leadership offered in heads and senior members of staff, by local education authorities and other institutions.

What help can the Learning Through Science project give? By their writing and continuing contribution to in-service education they can help many teachers to understand why of primary school curriculum lacks science, is inadequate and therefore the necessity for constructing and implementing the policy for its development.

As a way of "finding out", science gives young children much practice in making comparisons, testing ideas and considering evidence. This is the type of experience upon which later ability to make sound judgments is based. A significant contribution to the children's language development can also come from scientific experience. Through exploration of their surroundings, children can often collect the knowledge they need as a basis for responsible attitudes concerning the state of the environment and wide use of its natural resources.

Members of a project team hear many points of view and have opportunities of observing the results of teachers' actions. This enables them to speak and write about possible strategies for policy-making. Teachers are thus helped to become more aware of issues that they could, with profit, consider and develop the course of constructing their own guidelines—choice of objectives, suggestions for experience through which children might progress, framework of school organization within which scientific experience can be offered, development of work with class groups, ways of evaluating and recording progress in acquiring scientific attitudes, knowledge, conceptual skills and inquiry skills.

In large schools joint staff meetings would be required to allow all teachers to give their views on these issues, so some preliminary study and discussion might be undertaken by small working parties. The Learning Through Science, it will

deputy head and members of staff, holding posts of special responsibility within a school, are the obvious leaders for such sub-groups.

Members of all the project teams mentioned have agreed that young children work most effectively in small groups or, as individuals, on investigations of their own choice. Obviously, all children will not do this at the same time and, since most of their work will be of a practical nature, they will need access to a plentiful, varied supply of equipment and raw materials.

This requirement provides the Learning Through Science project team with a second assignment, further consideration of the resources teachers will require for successful promotion of individual learning.

Such facilities can be divided into two categories. In the first place there will be the actual items of equipment and materials that children need to aid their collecting, observing, testing and recording activities. Such resources can be stored in classrooms out on banks of shelving placed in strategic positions about the school building. They then become freely accessible.

In the course, the Learning Through Science project team hope to set up an exhibition of such resources, together with suggestions for their use and maintenance. This will be done in the dissemination centre now being established at Galsworthy College. Teachers concerned with provision of such facilities in their own schools will be able to visit this in their own ideas and guidance.

a full range of reagents for science teaching



Lifting heavy and light things

multi-visual materials or collections of equipment that children can use in different ways, in a matter for research. The project team will be seeking cooperation from many teachers and children in order to deal with this complex part of their work.

This short article is not the place for an argument on the merits or demerits of any teaching method. What is certain is that the level of success of any work with children will depend on the quality and thoroughness of their teachers' preparation. Cooperative work with colleagues on the formulation of a school policy for science, and the assembling of resources for implementation, will enable teachers to become prepared for work with children and to gain the confidence that doing so provides.

Policies for science and resources for practical investigations are not static amenities. They help teachers to bring about developmental changes in the children and consequently require revision at intervals, to keep pace with these children's changing needs.

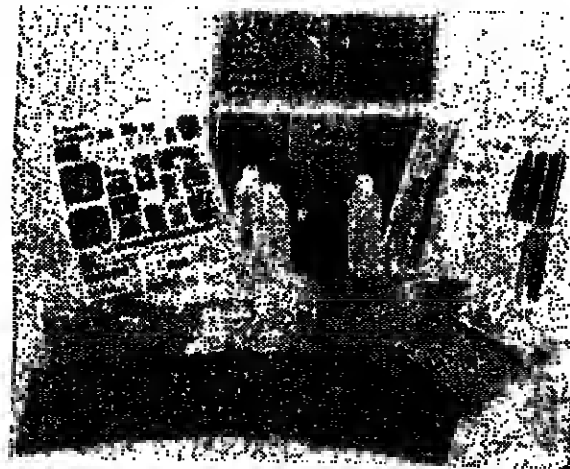
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Roy Richards is director of the Learning Through Science Project, assisted by Margaret Collis and Doug Kincaid.



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# SPACESHIP EARTH

## AN ENVIRONMENTAL SCIENCES MODEL

By David R. George

It seems to be critical these days that we should be developing students into effective decision makers who have a real sense of trusteeship for Spaceship Earth. This can be implemented by means of an effective environmental science course. The model here is action orientated and includes processes and techniques advocated by leading environmentalists.

An environmental science course should assist children in understanding a basic Spaceship Earth philosophy which should permeate the whole course. The concepts in the model encompass far more than is indicated here and seek to create an awareness, knowledge and understanding of the living and non-living world and their complex interactions; the social, political, economic influences of people and the need for and processes of decision making which should motivate the learner to adopt a life style compatible with environmental quality.

These major concepts become principles as they have broad implications and then they may assume the characteristics of a universal force. For example, where gravity is a universal force, it is comparatively easy to list principles such as those of Archimedes.

There have been few attempts to formulate sets of principles in environmental science. Because of its integrated approach it borrows concepts from many fields. This is its strength, but also its weakness in gaining academic recognition.

Much of the data for environmental problems are based on the natural sciences. Responsive action on these problems is the domain of the social sciences, especially geography, such as in land use planning, and political science.

Two basic processes are an integral part of environmental science and these are the problem solving and the making of value judgments essential to developing and carrying out exercises and making decisions. These problem solving skills include (a) recognizing a problem, (b) identifying environmental problems, (c) collecting information, (d) organizing and analyzing information, (e) suggesting solutions and (f) developing a plan of action.

The foregoing involves choice. Choices come from individual beliefs, attitudes and value judgments which environmental science courses cannot avoid because an individual's valuation determines his decisions and subsequent behaviour. For example, in everyday life, the learner sees value in pollution produced by technology in his efforts to satisfy consumer demands. Because it is easy to get caught up in the consumer society the learner needs to examine his way of living and the influence upon his life.

The next stage in our model is the teaching methods we adopt. The following analysis indicates several ways of teaching:

There are several ways one could take a class of children across a stream. One is to carry each individual across. Or, since you have Wellington boots on you can wade across and tell the children to find their own way. Or you can point to the stepping stones and guide the children across.

The role of the teacher of environmental science is to create a learning environment to assist students in acquiring knowledge, provide guidance to the student and participate in the learning process himself. Environmental science lends itself admirably to first-hand discovery learning, so the third method of crossing the stream is the teaching method to adopt.

At the bottom of the model there are some suggestions of the emphasis lies at different Piagetian stages of development. The emphasis in the early years is on awareness, whereas in the later years, the emphasis is on building knowledge, developing skills and building up a philosophy for the environment.

A young learner should be given opportunities to explore his immediate environment with all of his senses. It has been suggested that 70 per cent of the child's perception is through the eyes and yet, we encourage young people to observe and often not to perceive.

He should be taught to judge the quality of his immediate environment. An urban child who has never experienced clean air, uncrowded housing, safe streets and unpolluted water may not have the quality "measuring stick" by which to judge his own environment. At the same time urban children should have the opportunity of growing plants and rearing animals

both because this gives them the chance to use their senses and give them a sense of responsibility for their own food.

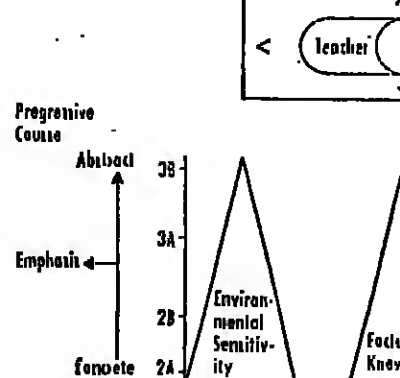
Environmental science has a major contribution here because, suggest, we shall need to be self-sufficient in the future. Current natural products technology is

continued on opposite page

Environmental Science model  
Philosophy: Spaceship Earth; Trusteeship attitudes.  
Concepts: Ecosystems, populations, natural resources, economics, evolution, production systems, urban environment.

Processes: Problem-solving skills, skills of communication, manipulative skills, scientific method, translation and reasoning. Geography: Local to world. History: present to past. Language development. Solving community problems. Value judgments.

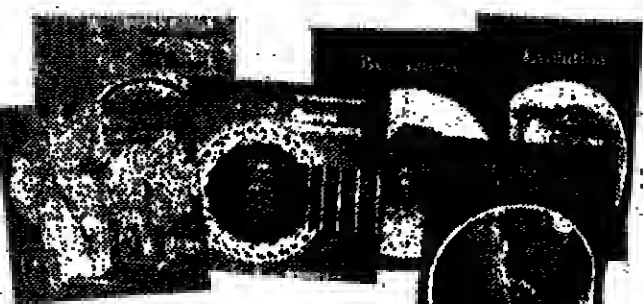
Teaching methods: Action-orientated environmental course.



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This series provides support and guidance to practising teachers and student teachers who are about to teach science in Primary schools. Those who have little or no scientific training will find them invaluable. There are nine generously illustrated units of work and a guide which describes the philosophy of the project and deals with different approaches for teaching science to children. Units £1.60 non-net each, Guide £1.95 non-net.



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This series consists of twelve colourful paperbacks which together form a foundation course for CSE. Exercise and project work based on the text form an integral part of the teaching method, and the simple, brief explanations and brightly, clearly labelled illustrations will ensure that students' interest is maintained. Units 25p each non-net.

For further information on these and other science series please write to the Educational Sales Department (A65), Macdonald Educational, Holywell House, Worship Street, London EC2A 2EN, or phone the Schools Information Service on 01-247 0121.

### "Spaceship earth" continued

Sound to arise. The old rural societies still have an active role to play here. The course should include: growing plants: School plot, greenhouse, pots and ornamental plants for food, ornamental and economical use. Rearing and caring for animals.

Weather observations and recording. Studies of the local environment; observation, classification, experiment and communication. Making collections, sorting things and the use of keys, surveys, maps, original records, interviews, use of relevant literature. Natural communities and artificial communities.

Further experiences: visits to museums, field and urban study centres, exchange visits (rural versus urban). The quality of the experience should be emphasized. Conservation of resources. Geology, soil, water supply, resource use and recycling, energy, pollution.

Multiple land usage. Planning, land and leisure, environmental quality.

This, I suggest, is a basic course for children in the middle years of education and combines geography, history and science—rural science as an integrated study.

The integrated approach to learning through, from and for the environment has enormous benefits. It allows children and teachers to work together in an informal way to develop more readily. It allows children to learn from direct experience and allows a spirit of cooperation to develop by providing discussion and healthy attitudes to form based on facts. It helps to make children environmentally aware citizens with a sense of personal responsibility for the environment.

Such an image might have been true up until the end of the 1950s, but since then geology has undergone a fundamental change, ushering in a conceptual revolution in a par with those experienced by the other sciences (such as those initiated by Copernicus, Newton, Darwin and Einstein). This "new geology"—plate tectonics—is so elegant, yet so simple, that it can be understood by pupils of most ages. Now that the Earth's crust is envisaged as consisting of a series of rigid plates interacting with one another, growing at mid-ocean ridges, and forming mountain ranges where they collide, geology has a theory that integrates most of the data accumulated over the past 150 years. Moreover the theory also has predictive value in built exploration programmes for natural resources, and in connection with natural disasters such as earthquakes and volcanic eruptions.

I do not intend to press geology's claim to be the school curriculum in its own right, but rather emphasize its great potential as a contributor to the other sciences. But while I recognize that the professional training of most science teachers has not included any geology, I still believe there is potential for aspects of the geological sciences to be used in the teaching of the "big three" science subjects.

I have two causes for optimism. First, a survey conducted by the Association of Teachers of Geology of all GCE examination centres submitting candidates in 1974 showed that one quarter of them included geology candidates (IEA was lowest with eight per cent, Wales highest with 47 per cent, and regions such as the Home Counties, Avon, and Yorkshire in the high thirties). Since 1974, geology has continued to grow as an examination subject, so the proportion of centres has probably increased too. These results suggest

# THE MISSING COMPONENT

Chris Wilson discusses the place of the geological sciences in the science curriculum

It is strange that in an era when great stress is laid on the importance of including in the curriculum courses that are topical and relevant to pupils' everyday lives, that geology as a school science subject is largely overlooked.

Stranger still is the fact that the paper on science produced by the Inspectorate for Curriculum 11 in 1976, though laying great stress on "science for action" and "science for citizenship", failed to include any mention of geological topics or concepts.

The relevance of the solid earth sciences in our everyday lives is constantly in the news. Hardly a week goes by without reports of new oil discoveries around our shores, new and reserves on land, the increasing rate at which the world consumes its reserves of physical resources, and the sad frequency of natural disasters caused by processes such as earthquakes, volcanic eruptions, landslides and floods. In addition, the results of lunar and planetary exploration are continually forcing us to look at our own planet in new ways. But I cannot be denied that school geology is still seen as a minority subject—it provides only two to three per cent of GCE candidates, and it is hardly a subject that still has strong links with geography at school level although many of these teaching geology rather than the reality of the links themselves.

Many science teachers probably still see geology as a subject pursued by "bunny hamsters", carrying eccentricities, and a discipline that is the handmaiden of geography in the school situation.

Such an image might have been true up until the end of the 1950s, but since then geology has undergone a fundamental change, ushering in a conceptual revolution in a par with those experienced by the other sciences (such as those initiated by Copernicus, Newton, Darwin and Einstein). This "new geology"—plate tectonics—is so elegant, yet so simple, that it can be understood by pupils of most ages. Now that the Earth's crust is envisaged as consisting of a series of rigid plates interacting with one another, growing at mid-ocean ridges, and forming mountain ranges where they collide, geology has a theory that integrates most of the data accumulated over the past 150 years. Moreover the theory also has predictive value in built exploration programmes for natural resources, and in connection with natural disasters such as earthquakes and volcanic eruptions.

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"turned off" by the very mention of the word science can be introduced to scientific concepts and skills; and they may well end up with a life-long leisure pursuit. On the other hand, for science converts, an introduction to some geological topics gives a valuable corrective to the danger of thinking that science always produces proven facts and theories. The value of geological theories illustrating the experience of an integrative approach to biology, chemistry and physics should not be overlooked either; in geology, integration is routine, not ffsion.

Through pupils' experience of geological topics, some of the conceptual themes of science emerge via concrete experiences based on local environments. The orderliness of the natural world can be demonstrated on a scale ranging from plate tectonics, to modern and fossil organisms. Geological themes can be used to demonstrate how inorganic interacts, thus redistributing energy. For example, the sun's energy drives the hydrological cycle: water vapour from the oceans is precipitated as rain, silt, and the breakdown of rocks, and transporting the resultant debris in rivers; on reaching the oceans once more, the water's softest load is deposited to form rocks. Thus the sun's energy is also seen to fuel the rock cycle. Study of the rock cycle leads to considering the role that the earth's internal heat (produced by radioactive decay) plays in driving the rock cycle, and producing spectacular events such as earthquakes and volcanoes. This example enables the various types of energy (mechanical, kinetic, thermal, gravitational etc) to be illustrated by phenomena pupils meet in their everyday lives.

The concept of time is unique to geology. A knowledge of the history of our planet, spanning 4,500,000,000 years, and an introduction to geological processes and materials that are relevant to everyday lives should surely be a part of every pupil's school education. Similarly, a treatment of the nature of physical resources which are the basis of

What do aspects of the geological sciences have in offer to enhance the teaching of science in schools? Geology undoubtedly motivates pupils to the extent that those

continued on page 54

## SCIENCE AND SOCIETY

Michael Coyle previews BBC School Television

Science has been tainted by the association it made in the human mind with Hiroshima, Vietnam, Cambodia and Srebrenica. So people, including scientists, are beginning to say that it is time to stop time to re-think and re-visit the contract between science and society.

This is the central theme of a new three part drama, *The Science of the Future*, in the series "General Studies" for sixth forms which will be on BBC School Television on November 13, at 11.45 am.

This specially commissioned production is set in science fiction, but the issues examined are the science of the present debate on genetic engineering. The roots of the kind of debate are traced back through Darwin to Galileo.

The line of the programmes is to question the role of science in a constructive way but not to fall into the trap of polarizing the issues into pro and anti-science.

The history of science is full of bold views of a kind. The popularly named philosopher, struggling against the odds with the repressive church and being forced to revise his idea that the earth revolved around the sun. In this picture of the piece because, as we now know, he was wrong and Galileo was right. The earth does not revolve around the sun.

But was Galileo right? Is the popular view the right one? After all, Galileo had no proof that the earth went round the sun. His argument was a proof, based on a model of the tides, was off the mark and he died as a heretic. This is an introduction to the history of science from biblical times to current genetic engineering.

The second programme, *Genetics and Food Production*, looks at the ways in which animals and plants are being redesigned to give us more food more economically. The third programme, *Genetics and the Future*, looks at the ways in which animals and plants are being redesigned to give us more food more economically. The third programme, *Genetics and the Future*, looks at the ways in which animals and plants are being redesigned to give us more food more economically.

# Lloyds Bank Science Forums

Teaching pack now available

For the second year, Lloyds Bank is sponsoring a series of six Science Forums on subjects to be discussed at the Annual Meeting of the British Association for the Advancement of Science. The titles are:

1. Feeding the nation
2. Biology of caves
3. Chemistry of building materials
4. Salmonella—the food poisoner
5. Is archaeology necessary?
6. Thinking about the future.

The 1978 Lloyds Bank Science Forums, broadcast by BBC Radio Bristol during the British Association Annual Meeting from 4 to 8 September as six half hour programmes, are now available in teaching packs for schools.

These library packs, containing three double-sided tape cassettes with teaching notes, cost £3 including postage and packing.



Please send me teaching pack(s) of Lloyds Bank Science Forums at £3 each (including postage and packing).

Name \_\_\_\_\_

Address \_\_\_\_\_

Teach by \_\_\_\_\_ (checkbox) / O (male) / F (female) to British Association for the Advancement of Science, The Press Office, British Association for the Advancement of Science, 23 Savile Row, London W1X 1AB.



"The missing component" continued from page 53.

modern society, and the way in which they are discovered and exploited should also be part of everyone's core-curriculum. Many chemistry courses examine how raw materials and refinery elements from naturally occurring minerals, but regrettably stop short of dealing with some of the natural processes that concentrate such elements by factors of several thousands compared to their overall abundance in the Earth's crust.

Intellectual, practical and communication skills can all be developed through geology. Fieldwork has great potential in this respect, for it introduces pupils to methods of recording information, collecting material (rocks, minerals and fossils), and making simple measurements on the orientation of rock strata and the dimensions of fossils. Such data can then be subjected to simple statistical analysis, and so make maths more interesting. Fieldwork gives pupils experience of planning an investigation, and later interpreting and synthesizing what they have found to produce an original communication, and so develop language skills. And fieldwork does not necessarily mean travel to remote and wild regions of the country. It can start in towns by examining the nature and origin of building materials—even concrete and brick.

In developing attitudes, studies of natural environments can stimulate a deeper understanding of landscapes—how they have evolved over millions of years under climates rather different to those we experience now. A responsible attitude to conservation matters can also be aroused, both in the sense of caring for the countryside and being concerned about the finite nature of natural resources. However, the

social relevance of geology is not confined to resources matters such as earthquake prediction and the need for a geological input in major engineering projects to avoid disasters such as dam failures or earth collapses of buildings during earthquakes, can be discussed with older pupils. The potential geology has for changing pupils (particularly girls) attitude to science in general should not be overlooked; similarly, the subject can introduce pupils to aspects of engineering problems and so help address the imbalance in school curricula that so often critics complain about.

I cannot claim that there is anything fundamentally new in the ideas and suggestions I have made in this article: many teachers already use aspects of the geological sciences to teach other disciplines and a number of the arguments and examples were put to the Schools Council by a geology review group that completed its work in 1975. The report of this group was published in 1977 as *Working Paper 58: Geology in the School Curriculum* (Erasmus Methuen Educational, £1.85). So far, the only tangible outcome of the report has been the transfer of responsibility for geology from the council's geography subject committee to its science committee. The principal recommendation of the paper, that "financial resources should be given to develop materials and ideas for geology teaching in schools" has still to be acted on by the council. The Association for Teachers of Geology have submitted a proposal entitled *Science Curriculum and a final decision concerning the funding of the project has still to be made, three years after the geology review group completed its report. But hope springs eternal—geological processes are, of course, incredibly slow.*

Chris Wilson was Chairman of the Schools Council Geology Curriculum Review Group that prepared *Working Paper 58: Geology in the School Curriculum*. He is senior lecturer in earth sciences at the Open University, and editor of the quarterly journal "Geology Teaching".

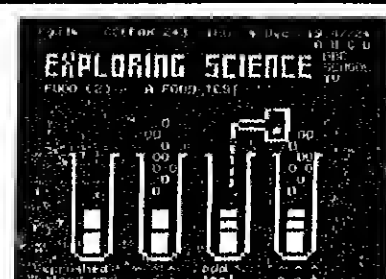
"Science and Society" continued from page 57.

Human Genetics, looks at the possibilities and the techniques for eliminating genetic disease. In presenting these two units BBC School Television extends its range in science to sixth formers. The past 10 years have seen the appearance of a number of new series which now provides a comprehensive output in science for teachers and pupils.

Each series developed to meet a particular educational need. *Science At A Glance*, for nine to 11-year-olds, is designed to help teachers who have little or no training in science, no laboratories and no special equipment.

*Exploring Science* is aimed at specialist teachers with full laboratory facilities and provides programmes that extend the ideas that children of 11 to 13 years of age are meeting for the first time.

*Physical Science* and *Biology* are two complementary series pro-



One of the Ceefax Pages produced for "Exploring Science".

viding resource material for teachers of CSE and O level students. Apart from programmes, the department has been involved in the development of Teletext for use in schools. Teletext, known as Ceefax in the BBC and Oracle in the IBA, is a service that uses an unscrambled signal in selected schools to explore further how Teletext can best be adapted to meet the needs of teachers.

Further information about the BBC science programmes for schools can be found in the BBC special leaflet sent to every head of Science.

Michael Coyle is a BBC School Television producer.

## A VEHICLE FOR CHANGE

R. W. West on in-service training

Teacher training is conceptualized as a three-phase operation involving initial training, induction and in-service training. The first phase is compulsory for all intending teachers, except graduates to science or mathematics; the second is inevitable for all who are employed and the third is both optional and avoidable.

Teachers, like motorists, need only satisfy the examiner once in their careers but, unlike the driver there are no normal circumstances subject to endorsement or suspension of their licence. To press the analogy still further, the cynic who argues that teachers are born and not trained, could suggest that a PGCE course equips the intending teacher to reorganize a classroom at a distance of 75 ft; that a BED course enables the student to "move away straight ahead or at an angle"; while the normal induction-probationary period usually enables all involved to operate an emergency stop.

In-service training, roughly speaking, is intended to provide for teachers something akin to the service schedule provided with a new car—regular opportunities for cleaning, lubricating, de-cocking and re-oiling—and like a car service, it is expensive and not necessarily guaranteed to lead to improved performance.

National policy following the reorganization of initial teacher education in the public sector now places a high premium on increasing the opportunities for teachers to undertake periods of service training. The Government's expenditure plans provide for an increase in the number of teachers released for in-service education and induction training to rise from the full-time equivalent of 4,500 teachers in 1977 to 18,500 teachers by 1981.

Local education authorities and training institutions are both under considerable political pressure to ensure that these targets are met and it is likely that by 1981 for more opportunities will exist for teachers and science teachers in particular, to undertake further training. The key issue during the next few years is, therefore, one of determining the form and content of in-service education that is most appropriate to the changing nature of the curriculum and the professional demands made on teachers.

Many science teachers argue that the curriculum development movement in the 1960s and the reorganization of secondary education that led to the "new schools" of the 1970s, have created a need for change in our schools. This change, therefore, a period of consolidation and replete free of any further attempts to alter the science curriculum.

Others, equally committed to the teaching of science, see a need for a radical re-definition of the science curriculum in order to achieve the social and educational goals of comprehensive secondary education in general and the concept of "science for all" in particular. The trend towards a common curriculum, common examination systems, and the increasing pressure to make science more relevant to social, industrial and practical issues suggests that many science teachers concerned with the academic study of science will need considerable support in meeting these new demands.

While formal courses will have an important role to play in this area, ongoing in-service training, in the form of a central factor in planning, in-service education and support. A science department, whether it be attempting to consolidate or improve, will be faced with

the requirement to systematically evaluate its performance and constantly monitor and modify teaching and learning programmes.

One major objective for the in-service education of science teachers is that of increasing the level of knowledge and expertise in the general areas of curriculum development, course design and course development. While there is a steadily increasing body of theory associated with these aspects of curriculum studies the practical aspects of the development of school-focused workshops and seminars designed to relate theory to the real problems of specific departments.

The notion of school-based, or school-focused, in-service training and support is now being widely discussed and in my view many science departments provide an ideal arena for the practical realization of the notion of school-focused INSET.

Implicit in a move towards school-based, or school-focused, in-service education is the requirement to re-define the relationship between the schools and the traditional providers of in-service education. A second objective, therefore, is that of achieving a new partnership between schools, i.e. advisers, teacher centres, colleges and departments of education. Why must be found for overcoming the traditional barriers, the tensions between teachers and outside agencies on the one hand, and between the various outside agencies on the other.

The current pressure exerted on colleges and polytechnics to switch substantial resources from initial teacher training to in-service education could militate against effective partnership with the schools if the main manifestation of increased INSET provision is simply one of proliferating the number of courses on offer. This danger can be avoided by the schools adopting an institutional posture towards in-service education; that is by insisting that while external courses can meet certain of the needs, others can only be met through modes of in-service support that are school- and department-focused.

This suggests that schools and departments should move towards an explicit and clearly articulated programme for staff and institutional development plans that also take into account the personal intellectual needs of members of staff.

In terms of staff development the likely needs of science teachers will, in the future, involve more simply providing opportunities for them to update their scientific knowledge. The trend towards a common curriculum, common examination systems, and the increasing pressure to make science more relevant to social, industrial and practical issues suggests that many science teachers concerned with the academic study of science will need considerable support in meeting these new demands.

While formal courses will have an important role to play in this area, ongoing in-service training, in the form of a central factor in planning, in-service education and support. A science department, whether it be attempting to consolidate or improve, will be faced with

their normal professional work and development to participate with SATRO's and organizations such as the Association for Science Education.

These agencies are becoming increasingly important as local in-service education is developed in this country. A period of development in a regional centre or local group to undertake specific research and development work in the science curriculum should be regarded as an equally valid utilization of INSET resources as research to read for an MSc.

Many of the suggestions made above reflect existing practice in some schools, colleges and local authorities. As always in education, the problem exists of converting isolated examples of good practice into widely accepted norms of professional behaviour.

While much of this article has been couched in terms of the secondary school curriculum and organization, the needs of the primary schools should not be overlooked. The same concepts of partnership and staff development in the context of primary science education, although they involve different problems relating to teacher release, perhaps some of these could be overcome by secondary or primary schools forming local consortia as is happening in some parts of the country.

Science teachers who pride themselves on their ability to analyse and solve problems, would perform a great service to education if they addressed themselves seriously to the problem of in-service education and support that attempt to meet both personal and institutional needs. Without some creative planning we may necessarily lead to any marked improvement in performance. The science teaching profession might, in fact, find the equivalent of its MOT.

Dr. R. W. West is Director of the School of Education, University of Sussex.

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## SECONDARY Art and Design continued from page 42

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 to the nearest local teacher  
 school. C.A. 0140  
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**ST. PETER'S HUMAN SERVICES**  
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Scale 2. Required for January 1979, well qualified. Children to share in the teaching of Geography in "A" level. 1818th Form-1241. Interdisciplinary with a view to developing these subjects in "O" level.

Application by letter to Headmaster with curriculum vitae, and quoting names of two referees.

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**EDUCATION DEPARTMENT**  
Applications are invited from suitably qualified TEACHERS for the following post:  
**ARNOLD HILL COMPREHENSIVE SCHOOL**  
10, Gable Road, Arnold  
Nottingham, NG6 6NZ  
Headmaster: E. M. Spelman, M.B.E.  
Mixed: 1,760 (11 to 18). (U.S. Form 104)  
For January, DRAGUATE CROAPNER (Scale 3) to be Secretary in Department. Interest in L.S. School Integrated Studies and

Applications (no forms) to  
headmaster, in manner of  
reference, as soon as possible.

**SEFTON**  
Metropolitan Borough of  
EDUCATION COMMITTEE  
LITTLERLAND HIGH SCHOOL  
Stierix Lane, Liverpool L21 0DA  
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Closing date for the selection

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**MAISEIDE**  
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Application turns and father  
Hill from the Head and her al-  
above school. Hec: 11162/  
8.

**Further Posts on  
Scale 2 and above**

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**BUCKINGHAMSHIRE**  
LESLIEDALE VALE DIVISION  
DUNN HILL COUNTY  
CHARTERED SECONDARY  
SCHOOL, WYNDOVER  
Head Teacher: G. W. Newman.

inquired January 8 TEACCH  
loss paid interest loss in the  
sinking of Nuffield Integrated Sci-

Removal expenses up to £150 payable in approved coin, and a housing allowance for married inmates are available to find immediate accommodation.

Application form (H.A.E.) from cadmaster.

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**LUCKINGHAMSHIRE**  
**YOUTH DIVISION**  
**OF WILLIAM BONDARS'S**  
**PRISON**  
Number 1624  
Number on roll: 350 boys

quired January, 1979, or earlier,  
radio to TEACHER at 914/814  
throughout the school. Scale 2

Application by letter to the  
Commissioner as soon as possible,  
with stamped return envelope.  
1939.

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**CUMBERIA**  
**EDUCATION COMMITTEE:**  
**ST. JOSEPH'S SCHOOL,**  
**Washington**

Required for January, 1971, a  
graduate TEACHER of MILITARY  
The position carries the responsibility  
for the organization and  
conduct of the program. D. 1

A Scale 2 post is available for an experienced candidate. Applications to the Headmaster, St. John's School, are invited.

**DORSET**  
WILLIAM ELIZABETH'S SCHOOL  
1000 West 1st Avenue  
Albuquerque, New Mexico, N.M.  
1-776-1101  
Organized January, 1978, membership  
of 114 students, 1978-1981. Located in  
Second in the Community Center.  
Teaching based on National Curriculum  
Standards. Well-equipped, purpose-built  
with four laboratory  
laboratories.  
Assistance with reinvestment and  
local expenses.  
Further details and application  
available upon request.

ENFIELD  
(London Borough of)

[illegible]

Wyedean School, Beckbury Road,  
Bedbury, Glos. via Cheltenham.  
Gwent NP6 7AA. Telephone:  
01453 8146. Enclosure H.A.E.

**PLAYERING**  
1 London Borough, cl)  
**EDUCATION DEPARTMENT**  
**BEDFORD PARK EDITION**  
(R. 1975 C. educational)  
Apply Drive, Bedford, East  
111 to 18 comprehensive  
situated on two sites linked by  
(footbridge)  
(B.F.A. allowance £201 to £274  
payable)  
Enrolled for January, 1975  
Enthusiastic GRADUATE, an ASSIS-  
TANT HEAD OF SCIENCE, Sc. 5,  
who would also assist in admini-  
stration of the Chemistry or other

"All level work depending on qualifications and experience. Commitment to curriculum development required, plus sound organizing

already undertaken. It is a well-equipped department with good Technical Assistance.

Full details of costs and department's philosophy and progress available on request.

There is a scheme for removal of oxgonase.

Letters of application to the Headmaster giving full curriculum vitae and quoting two referees.

**HAVERING**  
(London Borough of)  
**EDUCATION DEPARTMENT**  
**FOREST LODGE SCHOOL**

121 to 18 comprehensive  
situated on one site in modern  
buildings on edge of urban belt

A TEACHERS OF PHYSICS in into a large science department and share the teaching of experimental work to A. A. level. A Scale of work would be available for all other candidates. The Department is located in seven well-equipped laboratories and offers a 4-year course in the three main sciences.

There is a scheme for renewal of expenditure.

Letters of application to the Headmaster, giving full curriculum vitae and sending two references.

Dr. J. N. L. S.







دولت علیہ



# Lancashire

## County Council

### EDUCATION COMMITTEE

Closing date: 9th October, 1978

#### Primary and Special Schools

For application form send stamped addressed foilage envelope to Chief Education Officer, P.O. Box 61, County Hall, Preston, PR1 8R, unless otherwise stated.

#### Secondary Schools

Forms/further details from end returnable to the Head-teacher at the School, S.A.E. please.

#### HEADSHIP

**Lancaster Christ Church C.E. Primary School** (100 on Roll 1978)  
January, 1979.  
Junior and Infant.  
Headteacher, Group 5.

#### SPECIAL SCHOOLS

##### MASTERS/MISTRESSES

**BLACKBURN, DAME EVELYN FOX SPECIAL SCHOOL**  
January, 1979.  
Infant/Junior.  
Sole 1. (Sole) Team Teaching.  
**BLACKBURN, BLACKMOOR HURRY UNIT**  
January, 1979.  
Nursery Age children.  
Sole 1. Male on average.  
**BLACKPOOL, WOODLANDS SCHOOL** (73 Mixed) (S.E.N.)  
January, 1979.  
Sole 1. Experience with mentally handicapped children desirable.

#### SECONDARY SCHOOLS

##### HEADS OF DEPARTMENT

**BLACKBURN, JOHN RIBBY R.C. HIGH SCHOOL** (820 Mixed)  
North Road  
January, 1979.  
Head of English (Ordinate),  
Sole 4.  
**BLACKBURN, ALL SAINTS R.C. HIGH SCHOOL** (650)  
Hawthorn Road, Rawtenstall, Rossendale  
1st January, 1979.  
Head of Modern Languages,  
Sole 2.  
**BLACKBURN, RAYNTHALL GRAMMAR SCHOOL** (1010 roll, 200 sixth)  
Waterloo, Rossendale  
1st January, 1979.  
Head of Music,  
Sole 2.  
**BLACKBURN, PRIORY HIGH SCHOOL** (1,000 mixed)  
Crown Hill Road, Penwortham, Preston  
1st January, 1979.  
Head of Mathematics,  
Sole 2.  
**BLACKBURN, WITTON PARK HIGH SCHOOL** (1,100 mixed)  
Bosley Lane  
January, 1979.  
Head of Science and General Science, and Year Head,  
Sole 2.  
**BLACKBURN, WITTON PARK HIGH SCHOOL** (1,100 mixed)  
Bosley Lane  
January, 1979.  
Head of Science and General Science, and Year Head,  
Sole 2.

##### SCALE 2 POSTS AND ABOVE

**BLACKBURN, SHADWORTH HIGH SCHOOL** (1,212 mixed)  
Blackburn Road  
January, 1979.  
English, Second in department,  
Sole 3.  
**BLACKPOOL, PALATINE HIGH SCHOOL** (1,000 mixed)  
St. Anne's Road  
January, 1979.  
Head of Science and General Science, and Year Head,  
Sole 2.  
**BLACKPOOL, WITTON PARK HIGH SCHOOL** (1,100 mixed)  
Bosley Lane  
January, 1979.  
Head of Science and General Science, and Year Head,  
Sole 2.  
**BLACKPOOL, WITTON PARK HIGH SCHOOL** (1,100 mixed)  
Bosley Lane  
January, 1979.  
Head of Science and General Science, and Year Head,  
Sole 2.  
**BLACKPOOL, WITTON PARK HIGH SCHOOL** (1,100 mixed)  
Bosley Lane  
January, 1979.  
Head of Science and General Science, and Year Head,  
Sole 2.

##### SCALE 1 POSTS

**Lancaster Our Lady's R.C. High School**  
11-18 mixed Comprehensive (1,100)  
1st January, 1979.  
Religious Education,  
Sole 2.  
**Lancaster The Castle County Secondary School**  
(1,000 mixed)  
Craig Road  
1st January, 1979.  
Thornton Cliveley Hillfield High School (1,000)  
Bridgford Road (Thornton Cliveley)  
January, 1979.  
Woodwork/Metalwork (2nd Adv.),  
Sole 2.  
**Blackpool, Greenlands High School** (1,000 girls; 70 Black)  
1st January, 1979.  
Mathematics,  
Sole 2.  
**Blackpool, St. Mary's R.C. High School**  
(1,100 mixed)  
St. Mary's Road  
1st January, 1979.  
English,  
Sole 2.  
**Croston, The Rhipro Rawthorne C.E. High**  
(1,100 mixed)  
1st January, 1979.  
Mathematics and Boys' Physical Education,  
Sole 2.  
**Blackburn, St. Edmund Arrowsmith R.C. High School**  
(1,100 mixed)  
1st January, 1979.  
History with Science,  
Sole 2.  
**Blackburn, Notre Dame R.C. High School** (1,000 mixed)  
Whalley New Road  
1st January, 1979.  
History and Religious Education,  
Sole 2.  
**Mount Carmel R.C. High School** (1,100 on roll)  
1st January, 1979.  
General Studies/Including Art,  
Sole 2.  
**Whitworth High (600)**  
1st January, 1979.  
As above as possible.  
**Medford, Mathematics and English**

#### SECONDARY

##### Technical Studies

##### continued

##### ESSEX

**Chelmsford City Council**  
1st January, 1979.  
Technical Studies,  
Sole 2.

##### GLoucestershire

**Gloucester City Council**  
1st January, 1979.  
Technical Studies,  
Sole 2.

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Technical Studies,  
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#### NORTH YORKSHIRE

##### Technical Studies

##### continued

##### ESSEX

**Chelmsford City Council**  
1st January, 1979.  
Technical Studies,  
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##### GLoucestershire

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Sole 2.

##### GLoucestershire

**Gloucester City Council**  
1st January, 1979.  
Technical Studies,  
Sole 2.

#### CITY OF WAKEFIELD

##### Metropolitan District

##### continued

##### ESSEX

**Chelmsford City Council**  
1st January, 1979.  
Technical Studies,  
Sole 2.

##### GLoucestershire

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#### Other Posts on

##### Scale 2 and above

##### continued

##### ESSEX

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1st January, 1979.  
Technical Studies,  
Sole 2.

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Technical Studies,  
Sole 2.

#### SECONDARY

##### continued

##### Scale 1 Posts

##### continued

##### ESSEX

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Technical Studies,  
Sole 2.

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#### SECONDARY

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##### Scale 1 Posts

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##### ESSEX

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#### SECONDARY

##### continued

##### Scale 1 Posts

##### continued

##### ESSEX

**Chelmsford City Council**  
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Technical Studies,  
Sole 2.

#### SECONDARY

##### continued

##### Scale 1 Posts

##### continued

##### ESSEX











## INNER LONDON EDUCATION AUTHORITY Southwark College The Cut, London SE1 8LE

Applications are invited for the following posts available from 1 January, 1979.

### Head of Department of Mathematics and Physics (Grade IV)

### Head of Department of Biology and Chemistry incorporating a division of Fire, Health and Safety Education (Grade IV)

Salary scales in accordance with the current Burnham (FE) Report, on incremental scale from £7,841 to £28,901 plus £402 Inner London Allowance. Assistance may be given towards household removal expenses.

Further details and application forms obtainable from the Senior Administrative Officer at the College (Tel. 01-592 8661), returnable by 13 October, 1978.

ilea

### Redbridge Technical College

Little Heath, Romford, RM6 4XT

Tel. 01-599 5231

Principal, A. G. Hall, B.Sc.(Econ.), D.P.A.  
F.C.I.S., Cert. Ed.

Required by January 1, 1979.

### Lecturer II in:

Computer Science with Maths or Physics

### Lecturers I in:

Accounts and Allied Subjects  
Economics/Statistics  
Electronics with Maths or Physics

Application forms and further particulars are available from the Principal at the above address.

### STOCKSBRIDGE COLLEGE SHEFFIELD

Applications are invited for the following posts, duties to commence January 1st, 1979, or as soon as possible.

#### LECTURER I

Mechanical Engineering.

#### LECTURER I

Mathematics.

#### LECTURER I

General Studies/English.

#### LECTURER I

Science (ability to teach Physics and Chemistry to "A" level would be an advantage).

#### LECTURER I

Life Skills (particularly related to full-time and part-time courses for the young unemployed).  
Salary Scale: £3,192 to £5,334.  
Application forms and further details are available from the Principal, Stocksbridge College, Hala House Lane, Stocksbridge, Sheffield, S30 5BN (Tel. Sheffield 884530), to whom completed forms should be returned by 10th October.

### GUERNSEY EDUCATION COUNCIL

Guernsey College of Further Education

Application forms are invited from suitably qualified and experienced persons for the following posts, duties to commence 1st January, 1979.

### Lecturer in Electrical Craft Studies Grade I

This post is primarily concerned with the teaching of Electrical Installation to sixth standard and for the organization and development of the Electrical Installation workshop.  
The ability to offer Electronics at O and A level as a secondary field would be an advantage as would the ability to offer one or more subjects of the College's curriculum.  
The College is housed in a well equipped new building situated in the rapidly expanding residential area of St. Peter's in Guernsey.  
Salary in accordance with Burnham F.E. Scale for Lecturers Grade I in the Guernsey Education Authority, Superannuation Act 1972.  
Married teachers' fares and removal expenses may be paid.  
The successful candidate must be able to organize the duties on the College.  
Application forms and further details may be obtained on receipt of an Unstamped envelope from the Director of Education, P.O. Box 21, Guernsey, G.I., to whom they should be returned as soon as possible and no later than Thursday, 11th October, 1978.

### Colleges of Further Education

#### Heads of Department

##### CHESTER

Head of Department of Mathematics and Physics (Grade IV)  
Head of Department of Biology and Chemistry (Grade IV)

Applications are invited for the following posts, duties to commence 1st January, 1979, or as soon as possible.  
The Department, one of five in the College, runs full-time and part-time courses in Mechanical, Electrical, Electronic and Domestic Science Engineering Construction and Building.  
Applications are invited from persons with a minimum of five years' experience in the above fields, and who are qualified to teach at the level of the College.  
Further details and application forms obtainable from the Senior Administrative Officer at the College (Tel. 01-592 8661), returnable by 13 October, 1978.

##### DUDLEY

Head of Department of Mathematics and Physics (Grade IV)  
Head of Department of Biology and Chemistry (Grade IV)

Applications are invited for the following posts, duties to commence 1st January, 1979, or as soon as possible.  
Further details and application forms obtainable from the Senior Administrative Officer at the College (Tel. 01-592 8661), returnable by 13 October, 1978.

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### CLEVELAND

EDUCATION COMMITTEE  
LONGLANDS COLLEGE OF  
FURTHER EDUCATION  
Kingsway, Winton, Gateshead  
NE7 7DB  
Required as soon as possible: —  
**LECTURER  
GRADE I in  
Welding Craft Studies**  
To teach the relevant subjects in C.G.I. Course No. 215.  
Candidates should have suitable industrial experience; experience in teaching and the possession of a Teaching Certificate would be an additional advantage.  
Salary Scale: Lecturer Grade 1, £3,192 to £5,334.  
Application forms and further particulars may be obtained from the Principal at the College, Douglas Street, Middlesbrough, Cleveland TS4 2JW, to whom completed forms should be returned within 14 days of the appearance of this advertisement.

### CHESTER

EDUCATION COMMITTEE  
LONGLANDS COLLEGE OF  
FURTHER EDUCATION  
Kingsway, Winton, Gateshead  
NE7 7DB  
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Candidates should have suitable industrial experience; experience in teaching and the possession of a Teaching Certificate would be an additional advantage.  
Salary Scale: Lecturer Grade 1, £3,192 to £5,334.  
Application forms and further particulars may be obtained from the Principal at the College, Douglas Street, Middlesbrough, Cleveland TS4 2JW, to whom completed forms should be returned within 14 days of the appearance of this advertisement.

### CLEVELAND

EDUCATION COMMITTEE  
LONGLANDS COLLEGE OF  
FURTHER EDUCATION  
Kingsway, Winton, Gateshead  
NE7 7DB  
Required as soon as possible: —  
**LECTURER  
GRADE I in  
Welding Craft Studies**  
To teach the relevant subjects in C.G.I. Course No. 215.  
Candidates should have suitable industrial experience; experience in teaching and the possession of a Teaching Certificate would be an additional advantage.  
Salary Scale: Lecturer Grade 1, £3,192 to £5,334.  
Application forms and further particulars may be obtained from the Principal at the College, Douglas Street, Middlesbrough, Cleveland TS4 2JW, to whom completed forms should be returned within 14 days of the appearance of this advertisement.

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### Cleveland Education Committee LONGLANDS COLLEGE OF FURTHER EDUCATION

Required as soon as possible: —

### LECTURER GRADE I in Welding Craft Studies

To teach the relevant subjects in C.G.I. Course No. 215.

Candidates should have suitable industrial experience; experience in teaching and the possession of a Teaching Certificate would be an additional advantage.

Salary Scale: Lecturer Grade 1, £3,192 to £5,334.

Application forms and further particulars may be obtained from the Principal at the College, Douglas Street, Middlesbrough, Cleveland TS4 2JW, to whom completed forms should be returned within 14 days of the appearance of this advertisement.

### South Thames College,

Wandsworth High Street,  
LONDON, SW18 2PP

### Department of Business Studies

required as soon as possible: —

### Principal Lecturer

POST REF: BS/7-78

To act as Deputy to the Head of Department with responsibility for oversight of a wide range of courses including HNC, BEC, National and General Awards, 'A' and 'O' levels, Secretarial, Clerical and TSD and MSC sponsored courses. The subject areas of work covered by the Department are Economics, Economic History, Government and Politics and Secretarial Studies.

A University Degree or equivalent qualification in an appropriate discipline and wide teaching and administrative experience in Further or Higher Education in a position of responsibility is essential.

Salary scale: £7,047-£7,818, subject to formal approval, plus £402 Inner London Allowance.

### Senior Lecturer

POST REF: BS/8-78

With primary responsibility for the planning and further development of BEC courses within the Department.

Applicants should have a University Degree or equivalent qualification and considerable teaching and administrative experience in Further or Higher Education. Business experience would be an added advantage.

Salary scale: £6,051-£7,065, subject to formal approval, plus £402 Inner London Allowance.

### Lecturer II

POST REF: BS/9-78

To teach secretarial subjects and to develop teaching methods in Office Practice and complementary studies. Applicants should have appropriate qualifications and experience in teaching in Further Education. Commercial experience would be an added advantage.

Salary scale: £4,101-£5,658, subject to formal approval, plus £402 Inner London Allowance.

### Lecturer I

POST REF: BS/10-78

To teach secretarial subjects to full-time, part-time day and evening students.

Applicants should have appropriate qualifications and commercial experience.

Salary scale: On an incremental scale within the range of £3,192-£5,334, subject to formal approval, plus £402 Inner London Allowance, starting point depending on qualifications, training and experience.

FOR ALL POSTS EXCEPTING PRINCIPAL LECTURER PLEASE ENCLOSE STAMPED ADDRESSED ENVELOPE WHEN APPLYING.

Application form and further details obtainable from the Senior Administrative Officer quoting reference number, returnable within 14 days of appearance of advertisement.

ilea

### Nene College Northampton

### School of Mathematics Management and Business Studies LECTURER II/SENIOR LECTURER

### IN ACCOUNTING (two appointments)

To take effect as soon as possible. A Lecturer II appointment includes progression to Senior Lecturer.

Salary scales: Burnham FE.

Large area for further details and application form to Dr A. J. Wood, Dean, School of Mathematics, Management and Business Studies, Nene College, Moulton Park, Northampton NN2 7AL (Tel. 715000), returnable by October 11.

### East Sussex BRIGHTON TECHNICAL COLLEGE HOTEL AND CATERING DEPARTMENT

### LECTURER I IN BOOK-KEEPING/ACCOUNTS £3,192-£5,334

To commence as soon as possible.

Relocation grants in approved cases.

Details from Principal, Brighton Technical College, Polmeh Street, Brighton, BN1 4FA. (Tel. 0273) 685971).

Closing date: 2 October, 1978.

### Paddington College

### Biological Science Department (Ref. B/SW) Paddington Green, London W2 1NB

### Lecturer Grade II Biology, Anatomy and Physiology

The successful applicant will be expected to teach Anatomy and Human Physiology on specialised pre-medical courses and should be capable of teaching basic Biology to a wide range of technical courses at O and A level. A teaching qualification would be advantageous.

### Business and Secretarial Studies Department

(Ref. B/CB) Salford Crescent, London W8 3HW

### Lecturers Grade I

(1) To join an expanding and lively Department, with courses for RSA Vocational Preparation, CGLI Foundation, BEC General and National Certificate and Diploma, Secretarial and TOPS courses.  
(2) For General Commercial Subjects, with Clerical Duties, Business Calculations and/or Book-keeping, and the possibility of some Quantitative Methods.  
(3) For Shortland (Pitman 2000), Typewriting and Clerical Duties.  
Please state any additional subjects which can be offered.

### General Education Department (Ref. G/SM) Beethoven Street, London W10 4LP

### (4) Lecturer Grade II in Language Development

To coordinate language work in "Appendix II" courses (e.g., Training Service, Division Preparatory, TSD Introduction to Work and Bridging courses). Most of the language-learning in these courses takes place in communication workshops.

Re-advertisements. Applications in response to previous advertisements will continue to receive consideration.

Salaries in accordance with the Burnham (FE) Report. Lecturer I—on an incremental scale within the range £3,192 to £5,334, starting point depending on qualifications, training and experience.

Lecturer II—£4,101 to £5,658, plus, in both cases, £402 Inner London Allowance.

Assistance may be given with household removal expenses.

ilea

Further details and application forms from the Secretary to the appropriate Department.

### Metropolitan Borough of WIRRAL

### CARLETT PARK COLLEGE OF TECHNOLOGY Esplanade, Wirral, Merseyside L62 0AY

**SENIOR LECTURER** SCIENCE  
**SENIOR LECTURER** PRODUCTION  
**LECTURER II** ENGINEERING  
**LECTURER II** SOCIAL WORK (emphasis on the hand-capped)  
**LECTURER I** ELECTRICAL/  
**LECTURER I** ELECTRONIC  
**LECTURER I** ENGINEERING  
**LECTURER I** ENGINEERING (EITB)  
**LECTURER I** APPLIED SCIENCE  
**LECTURER I** PHYSICS  
**LECTURER I** MATHEMATICS  
**LECTURER I** COMMERCE  
**LECTURER I** ENGLISH AND  
LIBERAL STUDIES

Closing dates 14 days from appearance of this advertisement. Particulars and forms available from the College upon receipt of stamped addressed envelope.

### SHEFFIELD EDUCATION

GRANVILLE COLLEGE  
Granville Road, Sheffield S2 2PL  
(Telephone 0742-760271 Extension 211)

Required for 1st January, 1979: —  
(i) LECTURER GRADE II—  
ILLUSTRATION/DRAWING

Applicants are invited from experienced lecturers who can offer the highest quality of creative illustration in support of mainly vocational courses. An appreciation of the continuing of industrial requirements linked with an insistence on professional standards is required. The successful applicant will possess a line art background combined with a successful record in applied design, illustration and illustration.

Salary Scale:  
Lecturer Grade II within the range £4,101-£5,658

(ii) LECTURER GRADE I—  
DIMENSIONAL DESIGN

To work with mainly vocational students with particular emphasis on the Technical aspects of 3-D design. In addition to offering a high range of workshop skills, the successful applicant will be expected to have the ability to solve technical problems in the field and to assist students in developing creative thinking in practical projects through technical illustration in 3-dimensional reality.

Salary Scale:  
Lecturer Grade I within the range £3,192-£5,334

(iii) LECTURER GRADE I—  
GRAPHIC DESIGN

Should be a skilled practitioner and must have an active educational interest in Graphic Design and related studies, and a solid studio skills and practical experience. It would be of advantage if the range of skills offered could include a selection of the following: Technical Illustration; Photo-copying; Photo-lithography; Caricature Technology.

Salary Scale:  
Lecturer Grade I within the range £3,192-£5,334

Application forms, together with further particulars are obtainable from the Chief Administrative Officer (Tel. 011-241-241) and must be returned to the College within 14 days of the publication of this advertisement.

### STRANMILLIS COLLEGE BELFAST

PRINCIPAL, JAMES POMFRET, M.A., B.Sc., M.Ed.  
Stranmillis College is wholly concerned with the preparation of men and women for teaching in nursery, primary and secondary schools, mainly through G.E.O. Degree courses of three and four years and a one-year post graduate course, and with in-service courses for teachers. The College is non-denominational; there is no religious test. There are about 820 students in initial training courses.  
The College is pleasantly situated in an attractive wooded estate of some 45 acres, in a quiet residential neighbourhood on the southern outskirts of the city of Belfast. New building projects to the value of £2.5 million have been completed in recent years.

### LECTURER OR SENIOR LECTURER IN BIOLOGY

Applicants should have a good honours degree in Biology and successful teaching or lecturing experience. An interest in Ecology and Statistics would be an advantage. The appointment will be from January 1, 1979.

SALARY SCALE:  
£4,101 to £5,658/£7,572 with placing initially according to experience.

Assistance with removal expenses from outside Northern Ireland.

Further information about the College and the appointment, and a form of application, may be obtained from the Secretary, Stranmillis College, Belfast BT9 5QY.

Applications should be received not later than Friday, October 13, 1978.



Technical students, domestic should possess practical experience

[illegible]

WALLIAM LUTHER COLLEGE  
DEPARTMENT OF GENERAL  
EDUCATION  
MUSICAL LANGUAGE  
TRAINING UNIT  
A TEMPORARY FULL-TIME  
SINGING CHAIR is available  
immediately for this recently es-  
tablished unit. The appointment  
will be on a one year basis. Applicants  
must have a B. A. degree, ex-  
perience and be well-qualified.  
Applications should be sent  
written or by telephone to the  
Department of General Education

**Abstract**—The purpose of this study was to determine if there were differences in the prevalence of musculoskeletal disorders among different types of workers. The study included 600 male employees from three companies who had been employed for at least one year. Data were collected by means of a self-administered questionnaire. Results showed that the prevalence of musculoskeletal disorders was higher among non-manual workers than among manual workers. This finding suggests that the risk of developing musculoskeletal disorders is greater for non-manual workers than for manual workers.

**WEST SUSSEX**  
**WESTERN AREA**

**MANAGEMENT** Graduate, Graduate School of Management, Department of Management and Business Studies, Senior Lecturer (unemployed) required to organize and review in place of Department of Management Studies. Successful applicant will be required to teach management skills and organizational principles. The applicant must be a graduate in business administration. The Graduate School of Management, Department of Management and Business Studies, Senior Lecturer (unemployed) required to organize and review in place of Department of Management Studies. Successful applicant will be required to teach management skills and organizational principles. The applicant must be a graduate in business administration.

**WIGAN**  
Metropolitan Borough of  
**WIGAN COLLEGE  
OF TECHNOLOGY**

Applications are invited for  
the following posts in the  
recently designated tri-  
college to take effect from  
1st January, 1979:

**LECTURER (Grade 11)  
IN COMPUTING**

Industrial experience and ability to contribute to the development of new and improved products. Research will be available.

**Salary:** Lecturer (Grade 1) in the range \$2,111 to \$2,661. Teaching salaries and benefits are commensurate with experience.

**Administrative Officer, 1st College of Technology, 1000 N. 1st, Waco, TX 76798.**

**WIRRAL**  
(Metropolitan Borough of)  
**WIRRAL COLLEGE OF ART  
AND DESIGN AND ADULT  
STUDIES**  
Principal, J. L. Henderson, B.A.  
Applications are invited  
for the following full-time course  
commencing 1st January, 1964.  
**DEPARTMENT OF  
FOUNDATION AND  
3-DIMENSIONAL STUDIES**  
Enquiries: BRAD 1

The City and Guilds of London Institute, London, England, has been awarded a contract by the U.S. Navy to design and construct a new type of ship, the "Landing Ship, Tanks" (LST), for the Navy's fleet. The ship is to be built in the U.S. and is to be used for the transport of troops and supplies to the front lines. The ship is to be built in the U.S. and is to be used for the transport of troops and supplies to the front lines. The ship is to be built in the U.S. and is to be used for the transport of troops and supplies to the front lines.

**LECTURE BOARD IN PHOTOGRAPHY**

General and specialist level required in different levels including vocational courses, experience of advertising or editorial photography on assignment.

Salary scale for Lecturer Grade 1 is £1,022 in 20, depending upon qualifications and experience.

Application forms and their details may be obtained from the Principal, Central School of Art and Design, Adult Studies, Park

WOLVERHAMPTON  
 Polytechnic (Institution)  
 LUTHER COLLEGE OF  
 FURTHER EDUCATION  
 Westfield Road, Oldham  
 WY14 0HR  
 Principal, J. Idris BA (Hons)  
 FOS, FROS  
 On leave from January

**FORWARD:** I am HOME  
looking for a HOME in  
Northwest Subjects, m.  
cooking. A knowledge of  
experience of cooking for  
catering industry would be  
advantageous.

**Salary** Scale, \$7.12 to  
\$9.36 per hour.

(Further details and appli-  
cation form available from  
Principal, to whom complete  
application form should  
be returned within 14 days  
of appearance of this  
insert.)

**Abstract**—The purpose of this study was to determine if there were differences in the prevalence of musculoskeletal disorders among different types of workers. The study included 600 male employees from three companies who had been employed for at least one year. Data were collected by means of a self-administered questionnaire. The results showed that the prevalence of musculoskeletal disorders was higher among non-manual workers than among manual workers. The prevalence of musculoskeletal disorders was also higher among workers who had been employed for more than five years than among those who had been employed for less than five years. The prevalence of musculoskeletal disorders was also higher among workers who had been employed in the same position for more than five years than among those who had been employed in the same position for less than five years.

... ..

1. Subject: [illegible]  
 2. Location: [illegible]  
 3. Date: [illegible]

**THE**

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 of this advertisement.

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and list about 111



**Polytechnics**

**BIRMINGHAM**  
**BIRMINGHAM POLYTECHNIC**  
The successful applicant will be expected to make a significant contribution to the development of the Polytechnic in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the Polytechnic in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the Polytechnic in the field of design and technology.

**LEEDS**  
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**CITY OF BIRMINGHAM POLYTECHNIC**  
**SENIOR PROGRAMMER**  
(2 Posts)  
£4,245-£4,832 (Inclusive)  
Two Senior Programmers are required in the Computer Centre which operates an ICL 1902S (32K) and is proposing to install other computer equipment. A working knowledge of at least two languages and experience of Educational Computing would be an advantage. Further details and application forms (to be returned within 14 days of the appearance of this advertisement) from The Personnel Office, City of Birmingham Polytechnic, F Block, Birmingham B42 2SU.

**Athrofa Gogledd-dd Cymru**  
**The North Wales Institute**  
of higher education

**ASTON COLLEGE**  
**WREXHAM**  
**SCHOOL OF COMMERCE**  
Vacancy for:  
**Lecturer Grade I**  
in Shorthand and Typewriting  
Ability to teach these subjects through the media of both English and Welsh will be required. Suitably qualified persons are invited to contact the Institute Registrar, Kelsick College, Connaught Quay, Cardiff, for an application form and further details. Tel. Cardiff 617531.  
Closing date: October 13, 1978.

**CHELNER**  
Institute of Higher Education  
Faculty of Education, Arts and Humanities (Brentwood)  
**Senior Lecturer in Education**  
SENIOR LECTURER required to teach ORGANISATION AND ADMINISTRATION OF EDUCATION at BEd and Diploma level. Applicants should be highly qualified in this field and have experience in course development. Higher Degree would be an advantage.  
Salary Scale: £8,051 to £27,672 per annum, bar at £27,065.  
Application forms and further details available from the Institute Secretary, to whom application forms should be returned not later than 14 days after the appearance of this advertisement.  
(Telephone Chelmsford 6449; Ext. 223)

**Universities**

**BIRMINGHAM**  
**THE UNIVERSITY**  
The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology.

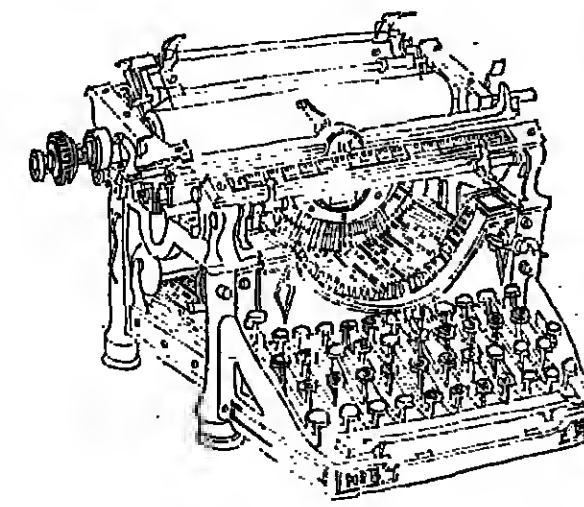
**LIVERPOOL**  
**THE UNIVERSITY**  
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**THE OPEN UNIVERSITY**  
**LECTURERS IN MATHEMATICS**  
The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology.

**THE OPEN UNIVERSITY**  
**THIRD YEAR TEMPORARY**  
The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the University in the field of design and technology.

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**You could buy one, sell one, tell people you'll do their work on one, or find someone who will - All through the TES Personal Columns**

Over half a million people read the TES every week and an advertisement in the personal columns can cost as little as £2.70. If you would like more information about advertising in the TES personal columns talk to Lyn Willis in our classified advertisement department on 01-837 1234 or write to: The Times Educational Supplement, Classified Advertisement Department, P.O. Box 7, New Printing House Square, Grays Inn Road, London WC1X 8EZ.

**Fellowships Studentships and Research Awards**

**CITY OF BIRMINGHAM**  
**THE POLYTECHNIC**  
The successful applicant will be expected to make a significant contribution to the development of the Polytechnic in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the Polytechnic in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the Polytechnic in the field of design and technology.

**West Glamorgan County Council**  
**GLAMORGAN**  
**WEST GLAMORGAN INSTITUTE**  
OF HIGHER EDUCATION  
**Appointment of Principal**  
(RE-ADVERTISEMENT)  
Applications are invited for this major academic/managerial post. The vacancy arises due to the appointment of the present incumbent as Director of The Polytechnic of Wales. The Authority is seeking to appoint a Principal who will lead the development of the new Institute especially in matters of policy and standards and will have the skills needed to interpret and relate the work of the Institute to education, industry, commerce and the community. The salary is likely to be at minimum point of GROUP 7 College. Application forms and further particulars may be obtained from the undersigned on receipt of a stamped addressed envelope, quoting post reference OF/12478. Closing date: The closing date for the receipt of completed application forms is Thursday, 5 October, 1978. John Beale, Director of Education, Education Department, Princess House, Princess Way, Swansea SA1 4PD.

**West Glamorgan County Council**  
**GLAMORGAN**  
**WEST GLAMORGAN INSTITUTE**  
OF HIGHER EDUCATION  
Applications are invited for the following post in the Authority's Service:  
**Head of the School of Art**  
(Re-advertisement) (BURNHAM GRADE VI)  
The School offers vocational courses in the Fine and Applied Arts, including a Foundation Course in Art, Architectural Glass, Graphic Design, Pottery and Technical Drawing and Photography, as well as non-vocational courses in a wide range of crafts. It also provides Art and Design Units for the Diploma of Higher Education and the Bachelor of Education degree. The successful candidate should have appropriate administrative ability, broad interests, significant professional experience and the personal qualities required to lead a team of over twenty full-time and a large number of part-time tutors. In particular, the Institute is seeking a person of vision in the field of Visual Arts in Higher Education who can make a significant contribution to the planning and development of high-level vocational courses such as T.E.C. Art and Design Units and degree schemes in the Applied Arts. Salary Grade: £8,845-£9,603. Application forms and further particulars are available from the undersigned on receipt of a stamped addressed envelope, quoting the appropriate post reference OF/12478. The closing date for the receipt of completed application forms is Thursday, 5 October, 1978. John Beale, Director of Education, Education Department, Princess House, Princess Way, Swansea SA1 4PD.

**Colleges of Higher Education**

**BEDFORDSHIRE**  
**THE COLLEGE OF EDUCATION**  
The successful applicant will be expected to make a significant contribution to the development of the College in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the College in the field of design and technology. The successful applicant will be expected to make a significant contribution to the development of the College in the field of design and technology.

**SOUTH GLAMORGAN**  
**THE COLLEGE OF EDUCATION**  
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**CHRYSDON**  
**THE COLLEGE OF EDUCATION**  
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**Colleges of Higher Education**

**DURHAM**  
**THE COLLEGE OF EDUCATION**  
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**ASTON COLLEGE**, Moul Road, Wrexham, Clwyd  
**SCHOOL OF ENGINEERING - ASTON DIVISION**  
Head of School, C. UOLINO, M.Sc.  
**LECTURER GRADE II**  
**IN ELECTRICAL ENGINEERING**  
**LECTURER GRADE I**  
**IN PRODUCTION ENGINEERING**  
Applications are invited for the above two posts at Aston College, Wrexham. Teaching duties for the two posts will include: - Electrical Engineering, Computer Systems, Control Systems, Production Engineering, Plant Maintenance, Engineering Workshop Theory. The successful candidates should have served recognized apprenticeships and possess relevant technical qualifications and industrial experience. Teaching qualifications or experience would be advantageous. Application forms to be returned duly completed or 13th October, 1978, available from the Institute Registrar, Aston College, Wrexham, Clwyd, or from the Clwyd County Council, Connaught Quay, Cardiff, Clwyd.

**CLWYD**  
County Council  
North Wales

**KENT**  
County Council  
Education Committee

**MID-KENT COLLEGE OF HIGHER AND FURTHER EDUCATION**  
**Head of Department of Business Studies**  
(Grade 4)  
Applications are invited for the above appointment from January 1, 1979. The Department offers full-time and part-time courses for the examinations of related professional institutions and for the Business Education Council. Applicants must have appropriate qualifications and experience and must have the ability and enthusiasm to run a lively department. Further details and application forms are available from the Principal, Mid-Kent College of Higher and Further Education, Horsted, Maidstone Road, Chelms, Kent, Tel. Medway 0834 41001. Completed applications must reach the College by October 13, 1978.

**Bedfordshire**

**Appointment of Adult Education Tutor for South Bedford**  
Applications are invited for this appointment to be taken up as soon as possible. The Adult Education Tutor for South Bedford - with responsibility to the Head of John Bunyan Upper School and Community College. The Adult Education Tutor must be a qualified teacher and will be expected to undertake a teaching or equivalent commitment in the School of at least one or up to two days each week. A person is sought who has successful Adult Education experience, organizing ability and a sincere interest in this sphere of education in its broadest aspects. Possession of a Diploma in Adult Education will be an added recommendation. The person appointed will be expected to join a team of full-time Adult Education organizers who will be present numbers 21 and to contribute towards the development of Adult Education within the County area as a whole. Salary: Further Education Lecturer II (£4,101 to £6,588). Application forms and further details for the above post obtainable from D. P. J. Broomfield, M.A., Chief Education Officer, County Hall, Bedford. Closing date October 13, 1978.



### SOUTHWARK CATHOLIC CHILDREN'S SOCIETY

ST. VINCENT'S COMMUNITY HOME, TEMPLE HILL, DARTFORD, KENT

St. Vincent's Community Home, situated 15 miles from London on the borders of Kent, provides care and education for boys aged 13-16 years in separate house units.

Applications are invited from married or single persons, male or female. St. Vincent's is a Roman Catholic foundation and applicants should be in sympathy with its religious ethos.

#### SENIOR RESIDENTIAL SOCIAL WORKERS

Experienced, qualified persons. Range 6. £4,036-£4,608 p.a. Plus £312 p.a. Supplement. Plus £180 p.a. Dartford allowance.

#### RESIDENTIAL SOCIAL WORKERS

Experienced or qualified persons. Grade 4/5. £3,057-£3,533 p.a. Plus £312 p.a. Supplement. Plus £180 p.a. Dartford allowance.

ACCOMMODATION: Deduction of £471 p.a. for full board and lodging, or house or flat on a service occupancy agreement.

S.I.A.C. Conditions of Service: 8 weeks plus 2 days annual leave.

UNFORMAL PRELIMINARY DISCUSSIONS: Please contact the Principal, Dartford 24500.

CLOSING DATE FOR APPLICATIONS: Three weeks from this date.

Full details and application forms available from: The Director, Southwark Catholic Children's Society, Russell Hill Road, Purley, Surrey CR2 2XR.

### TEACHER - BURNHAM SCALE 1

Post Ref. N550/TES

Moorland House School, Westwood Drive, Ilkley

Wanted for 1st January 1979, a teacher of General Subjects with responsibility for Woodwork, Art and associated Crafts throughout the residential school for 68 disturbed and delinquent children aged 9-13 years on admission.

A three bedroomed detached stone built house with full central heating is available to the successful candidate on a service occupancy basis at £231 per year.

Intending candidates will be welcome to discuss the post informally with the Headmaster by telephone (Ilkley 609409 Area Code 01454) or personally should they wish to visit the school.

Salary is Burnham Scale 1, together with additional special allowance totalling £1,443 p.a. which will include payment for an average of 10 hours overtime each week for duties outside school hours.

Eight week annual holiday.

The above posts are open to both men and women.

Application forms are available from the Staffing Section, Directorate of Social Services, Hillworth Lodge, Oakworth Road, Keighley.

**City of Bradford Metropolitan Council**

### Gwent County Council

#### Social Services

"Ty Mawr", Community Home School, Gwent, nr. Abergavenny.

#### Instructor in Horticulture

Salary Scale £3,276 to £4,641 or Burnham Grade 1 plus £564 Community Schools Allowance.

"Ty Mawr" is an Intermediate Community Home School for 103 boys between the ages of 12 and 17. The school is situated in a beautiful area of Gwent near the town of Abergavenny. It has its own grounds and a large vegetable garden. The school is available to staff and boys for single, Abergavenny, which is on the main railway line, is about four miles away. The school is situated close to the village of Gwent, 20 miles from Newport, 30 miles from Hereford and 32 miles from Cardiff. There are good road links to all areas.

Applicants for this post must have undergone a successful course of training in horticulture and also have a minimum of 3 years' experience in the horticultural industry. The post involves 15 hours weekly, 5 days a week, for which a payment of £870 per annum will be made. Unfurnished accommodation is available.

Details of this post can be obtained from Ralph Taylor, Headmaster, Abergavenny 439350.

Applications to be submitted by 16th October 1978.

Application forms and further information (where applicable) for the above posts can be obtained from the Personnel Section, Gwent County Council, County Hall, Gwent, NP4 2XR, to be returned by the same date to the same address.

#### ADULT EDUCATION continued

##### NORFOLK

Applications are invited for the post of **Adult Education Officer** for the Norfolk County Council. The successful candidate will be responsible for the development and co-ordination of adult education services in the county. The post involves a full-time position with a salary of £4,000 p.a. plus £1,000 p.a. allowance. Applications should be sent to the Director of Adult Education, Norfolk County Council, 100 Victoria Road, Norwich, NR1 1JL.

##### NORTHAMPTONSHIRE

Applications are invited for the post of **Adult Education Officer** for the Northamptonshire County Council. The successful candidate will be responsible for the development and co-ordination of adult education services in the county. The post involves a full-time position with a salary of £4,000 p.a. plus £1,000 p.a. allowance. Applications should be sent to the Director of Adult Education, Northamptonshire County Council, 100 Victoria Road, Northampton, NN1 1JL.

##### SUTTON

Applications are invited for the post of **Adult Education Officer** for the Sutton County Council. The successful candidate will be responsible for the development and co-ordination of adult education services in the county. The post involves a full-time position with a salary of £4,000 p.a. plus £1,000 p.a. allowance. Applications should be sent to the Director of Adult Education, Sutton County Council, 100 Victoria Road, Sutton, Surrey, SM1 1JL.

#### TEACHER - BURNHAM SCALE 1

Post Ref. N550/TES

Moorland House School, Westwood Drive, Ilkley

Wanted for 1st January 1979, a teacher of General Subjects with responsibility for Woodwork, Art and associated Crafts throughout the residential school for 68 disturbed and delinquent children aged 9-13 years on admission.

A three bedroomed detached stone built house with full central heating is available to the successful candidate on a service occupancy basis at £231 per year.

Intending candidates will be welcome to discuss the post informally with the Headmaster by telephone (Ilkley 609409 Area Code 01454) or personally should they wish to visit the school.

Salary is Burnham Scale 1, together with additional special allowance totalling £1,443 p.a. which will include payment for an average of 10 hours overtime each week for duties outside school hours.

Eight week annual holiday.

The above posts are open to both men and women.

Application forms are available from the Staffing Section, Directorate of Social Services, Hillworth Lodge, Oakworth Road, Keighley.

**City of Bradford Metropolitan Council**

### Residential Child Care Officer

(Observation and Assessment Centre for Boys) Brentwood

£3,067-£4,608 with bar at £3,834 plus £312 p.a. supplement. Fringe weighting £120 p.a. if non-resident. Boyles Court is in parkland at Gt. Witley near Brentwood provides observation and assessment facilities for up to 10 boys between 10-17 with an intensive care (Secure) Unit for 8 boys. The multidisciplinary staff work towards providing a balanced assessment of boys' social, emotional and educational needs and formulating treatment plans for the future.

The person appointed will work in one of three groups, (Junior, senior, and intensive care unit) led by a Senior F.C.O. will carry a small case load and be responsible for the general care and welfare of the boys in the unit. Although experienced candidates with appropriate training and qualifications are sought, mature applicants with wide experience of life and proven ability to relate well with others, particularly young people, will be considered. Informal discussion and/or visit can be arranged by telephone with the Director of Social Services, 77 Springfield Road, Chelmsford.

Application forms returnable by 17th October from the Director of Social Services, Kent House, 77 Springfield Road, Chelmsford.

#### Youth and Community Service

##### Essex Home School

### A Remedial Teacher in Establishment for Teenage Boys

Essex Home School is a Community Home with education on the premises for 82 boys aged between 13 and 16 years. The boys, who are accommodated in 3 house units, are all in the care of the local authority and are in need of a great deal of adult support in the classroom and living situation to enable them to come to terms with the problems they have experienced in their previous schools and neighbourhood. Special emphasis is placed on individual care and individual educational programmes in an atmosphere that enables control with sympathy and understanding. The adults in the school are required to have an awareness of the problems associated with emotional deprivation, frustration, aggression and delinquency in youth.

Applications are invited from qualified and experienced teachers to fill a vacancy in a team of 10 teachers at the school.

Salary - Burnham Scale 11 plus £564 former Approved school allowance, to work with small groups and to engage in a certain amount of individual tuition. Emphasis will be placed on calculations and communication together with appropriate linked general subjects.

Teachers at the school undertake 3-15 hours per week social work duties additional to primary hours, for which an extra payment is made (currently £879 p.a. for 15 hours per week).

Accommodation consisting of a house, at least, or single accommodation for which appropriate deductions will be made for board and lodgings is available.

Informal enquiries welcomed, Mr. G. Whitmore, Head of Education (Chelmsford 62437) would be pleased to discuss the post and if desired arrange for an informal visit to the school.

Closing date: 13 October 1978

Application forms from the Director of Social Services, Kent House, 77 Springfield Road, Chelmsford.

#### Adult Education Service

### Tutor/Organiser for Adult Literacy & Numeracy Senior Lecturer

Applications are invited from experienced teachers of reading with Adult Education experience for the post of **Coordinator of Adult Literacy and Numeracy Teaching** throughout the Borough.

The successful applicant will join the staff of the Adult Education Service and be based at an Adult Education Centre which is the referral point for all literacy enquiries.

Part-time clerical assistance is provided.

The present scheme caters for the needs of more than 450 people, taught by professional tutors in small groups.

The person appointed will be invited to take up the post as soon as possible.

Lecturer Salary, £3,051 to £7,005, plus Local Salary within the Burnham Further Education Senior Allowance. Starting point according to experience. This post carries a one-off on-call allowance.

Application forms and further particulars may be obtained from the Chief Education Officer (reference FE/AE/OF) Municipal Offices, High Road, Leyton E15: 01-639 3650, extension 25.

Closing date for applications: October 6, 1978.

**London Borough of Waltham Forest**

### ST. CHRISTOPHER'S COMMUNITY HOME WITH EDUCATION

Hayes, Middlesex

#### TIERED OF TRADITIONAL TEACHING

If you are looking for something different in the teaching of boys, this may be the job for you. You will be working with a group of boys who are in the care of the local authority and who are in need of a great deal of adult support in the classroom and living situation to enable them to come to terms with the problems they have experienced in their previous schools and neighbourhood. Special emphasis is placed on individual care and individual educational programmes in an atmosphere that enables control with sympathy and understanding. The adults in the school are required to have an awareness of the problems associated with emotional deprivation, frustration, aggression and delinquency in youth.

#### TEACHER

Burnham 1 Scale plus £564 Special Allowance

St. Christopher's is in the ongoing process of developing and improving its therapeutic approach with boys aged 13 to 17 years. Applicants should be qualified with relevant experience and should have the personal qualities of sympathy, enthusiasm, warmth and tolerance. For informal discussion contact either Mr. Hoey (Principal) or Mr. Sedgley (Assistant Principal) telephone 01-830 1001 (ext. 100).

Over and above the normal teaching week teachers are expected to do 18 hours per week extra duty for which there is payment of £879 p.a. (London Weighting £287 p.a. if non-resident).

Comparable three-bedroomed house available for which £200 p.a. rent payable. 75 per cent removal expenses payable.

Application forms and details from the Personnel Officer, Ref. ST/CR/1002, Civic Centre, Uxbridge, Middlesex.

#### YOUTH AND COMMUNITY SERVICE continued

##### Essex Home School

### A Remedial Teacher in Establishment for Teenage Boys

Essex Home School is a Community Home with education on the premises for 82 boys aged between 13 and 16 years. The boys, who are accommodated in 3 house units, are all in the care of the local authority and are in need of a great deal of adult support in the classroom and living situation to enable them to come to terms with the problems they have experienced in their previous schools and neighbourhood. Special emphasis is placed on individual care and individual educational programmes in an atmosphere that enables control with sympathy and understanding. The adults in the school are required to have an awareness of the problems associated with emotional deprivation, frustration, aggression and delinquency in youth.

Applications are invited from qualified and experienced teachers to fill a vacancy in a team of 10 teachers at the school.

Salary - Burnham Scale 11 plus £564 former Approved school allowance, to work with small groups and to engage in a certain amount of individual tuition. Emphasis will be placed on calculations and communication together with appropriate linked general subjects.

Teachers at the school undertake 3-15 hours per week social work duties additional to primary hours, for which an extra payment is made (currently £879 p.a. for 15 hours per week).

Accommodation consisting of a house, at least, or single accommodation for which appropriate deductions will be made for board and lodgings is available.

Informal enquiries welcomed, Mr. G. Whitmore, Head of Education (Chelmsford 62437) would be pleased to discuss the post and if desired arrange for an informal visit to the school.

Closing date: 13 October 1978

Application forms from the Director of Social Services, Kent House, 77 Springfield Road, Chelmsford.

#### Teacher-in-Charge

Salary: Burnham 2--£3,408 to £5,164 plus £564 allowance.

#### Teacher

Salary: Burnham 1--£2,984 to £4,862 or £5,010 for a good honours graduate plus £564 allowance.

#### SHERMANBURY GRANGE, Nonr HORSHAM

The Community Home with education on the premises caters for up to 24 young people, aged 14 to 17 years. It is situated in its own extensive grounds in a delightful part of rural Sussex yet within easy reach of Brighton and Hove, with main line railway links to London. The Education Unit is housed in separate accommodation within the grounds and the staff comprises the Teacher-in-Charge and 4 Teachers/Instructors who provide a general education to the young people in care. Applicants should be able to offer a specialist subject plus other options. The successful applicant will be expected to commence duties in January, 1979, unless they are available earlier.

#### Teacher

Salary: Burnham 1--£2,984 to £4,862 or £5,010 for a good honours graduate plus £564 allowance.

This Reception/Observation/Assessment Centre caters for 35 boys and girls of all ages. Rustington is situated on the South Coast and has good rail links to London, via Brighton. The Education Unit is housed in separate accommodation within the grounds and caters for those few children who are unable to attend local schools. The staff comprises a Teacher and part-time instructor and between them they should provide a good basic education for the children in care.

#### Teacher

Salary: Burnham 1--£2,984 to £4,862 or £5,010 for a good honours graduate plus £564 allowance.

BEECHFIELD, COPTHORNE, CRAWLEY

The Reception/Observation/Assessment Centre for 26 difficult teenage boys requires a Qualified Teacher who has preferably completed the probation period, to work with small groups of these boys. The job includes considerable remedial work, some attention to individual educational assessment, reports and close liaison with the Care Staff.

Application forms available from the Director of Social Services, The Orange, Tower Street, Chichester, Sussex.

#### Teacher

Salary: Burnham 1--£2,984 to £4,862 or £5,010 for a good honours graduate plus £564 allowance.

#### Teacher

Salary: Burnham 1--£2,984 to £4,862 or £5,010 for a good honours graduate plus £564 allowance.

#### Teacher

Salary: Burnham 1--£2,984 to £4,862 or £5,010 for a good honours graduate plus £564 allowance.

#### YOUTH AND COMMUNITY SERVICE continued

##### Essex Home School

### A Remedial Teacher in Establishment for Teenage Boys

Essex Home School is a Community Home with education on the premises for 82 boys aged between 13 and 16 years. The boys, who are accommodated in 3 house units, are all in the care of the local authority and are in need of a great deal of adult support in the classroom and living situation to enable them to come to terms with the problems they have experienced in their previous schools and neighbourhood. Special emphasis is placed on individual care and individual educational programmes in an atmosphere that enables control with sympathy and understanding. The adults in the school are required to have an awareness of the problems associated with emotional deprivation, frustration, aggression and delinquency in youth.

Applications are invited from qualified and experienced teachers to fill a vacancy in a team of 10 teachers at the school.

Salary - Burnham Scale 11 plus £564 former Approved school allowance, to work with small groups and to engage in a certain amount of individual tuition. Emphasis will be placed on calculations and communication together with appropriate linked general subjects.

Teachers at the school undertake 3-15 hours per week social work duties additional to primary hours, for which an extra payment is made (currently £879 p.a. for 15 hours per week).

Accommodation consisting of a house, at least, or single accommodation for which appropriate deductions will be made for board and lodgings is available.

Informal enquiries welcomed, Mr. G. Whitmore, Head of Education (Chelmsford 62437) would be pleased to discuss the post and if desired arrange for an informal visit to the school.

Closing date: 13 October 1978

Application forms from the Director of Social Services, Kent House, 77 Springfield Road, Chelmsford.

#### Teacher

Salary: Burnham 1--£2,984 to £4,862 or £5,010 for a good honours graduate plus £564 allowance.

#### Teacher

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#### Teacher

Salary: Burnham 1--£2,984 to £4,862 or £5,010 for a good honours graduate plus £564 allowance.

### Teachers in Adult Training Centres

The Authority wishes to appoint two full-time and six part-time teachers (Burnham scale 2) to work in Adult Training Centres maintained by the Devon Social Services Department.

These posts are to be financed by a joint financing arrangement between the Devon Area Health Authority and Devon County Council. The posts will be under a three-year six month contract and Burnham conditions will otherwise apply.

The full-time posts are in Plymouth and Kinsaleigh. The part-time posts are in Axminster, Crediton, Exmouth, Padstow, Bideford and Tavistock.

Applicants should be qualified experienced teachers, preferably with experience of remedial or special education work. They will be required to provide multi-basis education within the context of an adult learning centre where there will be young people and adults who suffer from mental and other forms of handicap which prevent them from being in open employment.

Further details and application forms (S.A.E.) available from Chief Education Officer (Reference 88), County Hall, Topham Road, Exeter. Closing date for completed applications—12th October.

**DEVON**

### TEACHER OF GENERAL AND REMEDIAL SUBJECTS

JNC Conditions of Service Houghton/Burnham Scale 1 + £564 addition to scale and £586 in return for 10 hours extraneous duties per week

The Field House, Western Road, Clant, Nr. Stourbridge is a girls Observation Centre and former remand home. A teacher is required to work in both the open and secure units.

To arrange a visit contact Miss Lewis, Tel: Hagley 2390.

Accommodation may be available.

Ref. 051/NM/78/630

### TEACHER OF GENERAL AND REMEDIAL SUBJECTS

JNC Conditions of Service Houghton/Burnham Scale 2 + allowance £300 (under review)

Allotment House, 232 Moseley Road, Highgate is a boys Observation and Assessment Centre catering for 20 pupils between the ages of 9 and 14. The person appointed will be expected to observe and assess the pupils and make recommendations for their future educational needs. The teachers liaise with psychologists, psychiatrists, schools, residential social workers and social workers producing reports for case conferences. Normal school holiday allowance on a rota basis at the centre is open for 62 weeks.

Informal enquiries to Mr. M. Dalby, Officer in Charge of Miss M. Pearson, Senior Teacher, Tel: 021-440 1888.

Ref. 051/NM/78/631

### SENIOR TEACHER

JNC Conditions of Service Houghton/Burnham Scale 2 + £564 addition to scale + extraneous duties allowance £879 p.a. in return for 15 hours per week, a necessary requisite for any teacher wishing to apply

St. John's Community Home School, 18 Gravelly Hill Road, Edgbaston is a therapeutic co-educational Community Home School catering for 38 resident and 16 day pupils requiring a teacher from 1st January 1979.

The person appointed will be expected to teach in both the open and secure units and deputise for the Assistant Principal (Education).

This is a non-resident post but accommodation may be available in the first instance.

Informal enquiries to Mr. C.R. McKail, The Principal or Mr. P. Wilkinson, The Deputy, Tel: 021-373 0882.

Ref. 051/NM/78/632

### TEACHER OF GENERAL AND REMEDIAL SUBJECTS (Non Resident)

JNC Conditions of Service Houghton/Burnham Scale 2 + £200 additional allowance (under review)

The Uplands, 33 Green Hill, Blackwell, Nr. Bournemouth, is an Observation and Assessment Centre catering for 27 boys and girls. The person appointed will be expected to observe and assess the pupils and make recommendations for their future educational needs. The teachers liaise with psychologists, psychiatrists, schools, residential social workers and social workers producing reports for case conferences and the courts.

Ref. 051/NM/78/633

NO. in residential establishments for Resident Officers, board and accommodation charges are £488 p.a. A Non Resident Officer who is required to sleep in would receive an additional payment of £2,01 per night.

**GALANES QUOTE INCLUDE ALL PAY SUPPLEMENTS.**

Candidates, male or female, may obtain application forms (returnable by 23rd October, 1978) and further details from:

The Personnel Officer, Social Services Department, Snow Hill House, 10-15 Livery Street, Birmingham B3 2PE.

Please quote reference, C.051/NM/78/633.

**BIRMINGHAM CITY COUNCIL**



## SHEFFIELD EDUCATION COMMITTEE

## YOUTH SERVICE

## VACANCIES OCCUR FOR

## FULL-TIME ASSISTANT YOUTH WORKERS

at

Belgian Centre  
Bergway Road Youth Club  
Colley Campus Youth Centre  
Earl Marshall Campus Youth Centre  
Park Youth Club

Applications are invited from suitably qualified persons, to service training and supervision to enable the persons appointed to develop a full range of Youth Work Skills. Salary scale 1, N.C. Qualified - £3,174-£4,038.

Application forms and further details are obtainable from the Chief Education Officer, P.E.C.K., Education Department, P.O. Box 47, Leopold Street, Sheffield S1 1RZ, which should be returned without delay.

## CITY OF MANCHESTER

## EDUCATION COMMITTEE

## NORTH MANCHESTER AREA

## OF COMMUNITY EDUCATION

## MILES PLATTING COMMUNITY

## EDUCATION CENTRE

Holland Street, Manchester M10 7AF

Required as soon as possible, a

## COMMUNITY

## EDUCATION WORKER

(C.E.43)

with appropriate qualifications and experience to be a member of a team assisting initially in the development of a Community Education Centre in the Miles Plating area of Manchester, to promote the integration of the centre into the local community and to assist the head in achieving this development in an area of social disadvantage.

The post will include outreach work with young people and those unemployed and socially disadvantaged. Applicants will be welcomed from people experienced in one or more of the following areas of work, i.e. youth, community/adult education. Salary: Burnham F.E. Lecturer II, £4,101-£5,585.

Forms and further particulars to be obtained from the Towns and Further Particulars to be obtained from the Area Principal, North Manchester Area of Community Education, Abraham Moss Centre, Crescent Road, Manchester, M16 6UP, telephone number 795 5996, to whom they should be returned by not later than 19th October, 1978.

## BARNESLEY METROPOLITAN BOROUGH

## COUNCIL

## EDUCATION DEPARTMENT

## COMMUNITY

## EDUCATION

## TUTOR

## WOMBWELL

Applications are invited for the above post. Applicants should be qualified youth workers or teachers with youth experience.

The responsibility of the Tutor will be for the development of the Community Education in the field within the catchment area of the Wombwell Comprehensive School and the successful applicant will work under the supervision of a Community Education Officer.

Salary and conditions of service are in accordance with the Lecturer 1, Scale of the Burnham FE Report. Please send SAE to the Education Officer, 50, Huddersfield Road, Barnsley, for further particulars and application form. Completed forms, required within 14 days of this advertisement.

## STRATHCLYDE

## REGIONAL COUNCIL

## RENFREW SUB-REGION

## EDUCATION DEPARTMENT

## YOUTH WORKER

The above post is part of an urban aid project in the Lower Sower area, Greenock, and the likely duration is three years. Salary scale: £3,851-£4,832 or Y and O £3,486-£4,500 according to qualifications held.

Applicants should hold diploma in Youth and Community Studies or appropriate social work qualification. Duties include carrying out the requirements of the joint education/social work management team in the development and supporting the existing activities for young people in the area. Salary ranges are inclusive of supplement.

Application forms may be obtained from the Assistant Director of Manpower Services, Regional Office, Cotton Street, Paisley, to whom completed forms, quoting ref. R64 should be returned by 19th October, 1978.

R. M. O. McCULLOCH  
Director of Manpower Services

## YOUTH AND

## COMMUNITY SERVICE

## continued

## HAMPSHIRE

## SOUTHAMPTON

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## EDUCATION COMMITTEE

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METROPOLITAN BOROUGH OF SEFTON  
EDUCATION COMMITTEEPrincipal Administrative  
Assistant  
(Buildings and Supplies)

Salary Scale: £6,011-£8,228-£8,568 p.a. including £312 Pay Supplement.

Applications are invited for appointment to the above senior post. The Buildings and Supplies Division of the Education Committee is responsible for the management of the Borough's Buildings and Supplies. The post holder will be responsible for the management of the Buildings and Supplies Division, including the management of the Buildings and Supplies Division's staff, the management of the Buildings and Supplies Division's budget, and the management of the Buildings and Supplies Division's resources.

Further particulars and application forms are obtainable from the Personnel Officer, Sefton Education Committee, 10, Sefton Road, Sefton, Merseyside, L35 9JF. The closing date for applications is 13th October, 1978. Please supply a.s.e.

## METROPOLITAN BOROUGH OF STOCKPORT

PENDLEBURY HALL TEACHERS' CENTRE  
Lancashire Hill, Stockport

## WARDEN

Burnham Scale 4

The Officer appointed will be expected to develop further the wide range of activities in the Centre, to co-operate with the education advisers in all aspects of in-service provision; to assist in implementing the principles of INSET (In-Service Education and Training); and to foster the development of a co-ordinated range of support services for schools. This is a professional post requiring a qualified teacher.

Applicants will be expected to have a valid driving licence and to own or purchase a car (Assistance available). A car allowance is provided on a casual-user basis. The Authority has schemes of assistance including removal expenses, disturbance allowance, furniture allowance and temporary housing in approved cases.

Application forms and further particulars from the Director of Education, Salford House, Piccadilly, Stockport, to whom applications should be returned as to be received by 9th October, 1978. If you wish to receive an acknowledgment, please enclose S.A.E.

CITY & GUILDS  
OF LONDON INSTITUTEADMINISTRATIVE  
OFFICER

Applications are invited from suitably qualified men and women, aged 25-35, for the post of Administrative Officer in the Institute's Teaching Services Department. Previous experience of educational administration, including test construction, and of committee work is desirable.

The salary will be initially in a scale rising to £5,173 per annum and the starting point will be dependent upon qualifications and experience. The post is pensionable and offers opportunities for further progress. An application form and further details may be obtained from the Personnel Officer, City & Guilds of London Institute, 46, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468. Applications must be returned within a fortnight of the appearance of this advertisement.

HERTFORDSHIRE COUNTY COUNCIL  
CAREERS SERVICE

## SENIOR CAREERS OFFICER

based at Letchworth  
Salary: £4,461-£4,781 plus £312 Salary Supplement.  
Car User Allowance available.  
Applications are invited from suitably qualified and experienced officers to assist the Director of Careers Service in the administration of the Careers Service in the North Hertfordshire Division, and to undertake a reduced base load of advisory work.

## CAREERS OFFICER

based at St Albans  
Salary: £3,420-£4,320 plus £312 Salary Supplement. (Ex gratia) will be taken into account when determining the starting point.  
Car User Allowance available.  
Applicants should hold the Diploma in Careers Guidance, or expect to do so in the near future.  
There may be an opportunity for the people appointed to these posts to work EITHER with a general base load of young people of all abilities, OR with young people on Advanced Level courses.  
Details and application forms from the County Careers Officer, County Hall, Hertford, to be returned by 12 October, 1978.

OVERSEAS  
Appointments  
continued

## AFRICA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Africa. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## ALGERIA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Algeria. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## JAMAICA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Jamaica. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## SPAIN

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Spain. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## TANZANIA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Tanzania. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## KENYA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Kenya. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## INDONESIA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Indonesia. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## MALAYSIA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Malaysia. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## SINGAPORE

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Singapore. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## THAILAND

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Thailand. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## VIETNAM

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Vietnam. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## YUGOSLAVIA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Yugoslavia. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## ZAMBIA

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Zambia. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

## ZIMBABWE

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Zimbabwe. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

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## SPAIN—English teachers offering private tuition in English and Spanish. Please telephone 01-278 2468.

## Administration

## Local Education

## Authority

## EALING

TEACHERS (all subjects) urgently needed in Catholic mission schools throughout Ealing. For further details, contact the African Education Service, 10, Abchurch Lane, London, EC4A 3DF. Telephone 01-278 2468.

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## BOLTON METROPOLITAN BOROUGH

## CAREERS OFFICER

AP/3/4 £3,420-£4,320 plus £312 pa supplement

Applications are invited for the above post in the Authority's Careers Service for the full range of vocational guidance duties. The starting salary will depend on qualifications held but holders of the Diploma of Careers Guidance will automatically commence on Grade AP4.

Application forms available from the Personnel Officer, Town Hall, Bolton, to be returned by 13 October, 1978.

## EDUCATION DEPARTMENT

DEPUTY SCHOOL MEALS  
ORGANISER

£4,545 plus £520 to £5,103 plus £520 Supplement (Subject to review under Southbury Committee 1978 salary agreement)

Southbury Senior Range for School Meals Organiser Male/Female.

Application is invited for this key post within an Authority providing some 125,000 meals daily.

Further particulars and application form from: Personnel Division, Education Department, Margaret Street, Birmingham B3 3BU.

Closing date for applications: 6th October, 1978.

BIRMINGHAM  
CITY COUNCIL

## ASSISTANT EDUCATION OFFICER(S)

PO1 (1) £6,012 to £6,627 p.a. incl. L.V. and Supplement.

Applicants should be good Honorary Graduates with a First Class Honours Degree in Education and successful teaching experience. There may be up to three posts available each of which offers an excellent opportunity to enter educational administration and gain all round experience. The work will be varied and the emphasis, according to actual vacancies and candidates' preferences, on primary, secondary or development work.

A 30-hour week is worked over a 4/4 day week or nine day fortnight with flexible starting and finishing times.

Fringe benefits may include 75 per cent rental expenses, but less involved in house purchase or lodging allowance. Car allowance payable.

Application forms and further particulars from the Personnel Officer, quoting ref. E/28/72X.

LONDON BOROUGH OF HILLINGDON

Civil Centre, Unbleached, 100, 100W, Tel. 01-278 2468. Closing date 13.10.78.

Applications are invited for the following posts:

EDUCATION DEPARTMENT

CAREERS OFFICER

(a) CARMARTHEN (EDN 215)

(b) ABERYSTWYTH (EDN 216)

Grade: AP/3/4 £3,420-£4,320 plus £312 pa supplement

The successful applicant will be required to join the Authority in the provision of a vocational guidance and placement service within their area.

Applicants should ideally be experienced and/or hold the Diploma in Careers Guidance or equivalent. A car allowance will be paid.

Application forms available by 13th October, 1978, to the Personnel Officer, Education Department, County Hall, Carmarthen, SA31 1AA.

Completed forms should be returned by 13 October, 1978.

Carrying over will disqualify.

BIRMINGHAM CITY COUNCIL

WEST GLAMORGAN  
COUNTY COUNCIL  
EDUCATION DEPARTMENT

## CAREERS OFFICER

REF: SVP/037/452

The Careers Officer(s) appointed will be responsible to the District Careers Officer for the full range of Careers Advisory work with pupils up to and including 5th year; assisting in the guidance and placing of young people who have left school and to make contact with local employers and Further Education establishments. Applicants should preferably hold the Diploma in Careers Guidance or be otherwise suitably qualified and experienced.

Salary: £3,933 to £4,320 plus £312 Supplement per annum.

## NON-RESIDENT WARDEN

(FULL TIME)

REF: SVP/037/442

## Bonymaen Community Centre

Applications are invited from suitably qualified persons for the above post in the Authority's Youth and Community Centres. The successful applicant will be required to organise and administer a full-time Community Centre, Salary: £3,471 to £4,422 per annum.

Hours: Normally ten morning, afternoon or evening sessions per week (inc. Saturday/Sunday) of which not more than eight sessions per fortnight should be evening sessions. Application forms, returnable by 13th October, 1978, are available from The County Clerk, Central Personnel Unit, West Glamorgan County Council, The Guildhall, Swansea. Telephone: Swansea 8521, Extension 2823.

Please quote appropriate reference number.

## DERBYSHIRE AREA HEALTH AUTHORITY

has vacancies for

## TWO HEALTH

## EDUCATION OFFICERS

Salary scale: £4,421-£5,326. New entrants to the Health Service commence at the minimum of the scale.

Applicants are invited from suitably qualified individuals, preferably with a degree in education, with background relevant to Health Education.

Candidates should have an interest in the promotion of health and the prevention of illness.

We are particularly interested in experienced in communications skills, and design, physical fitness or nutrition. The ability to work with a wide range of professional and community groups is essential.

The small Department is in the process of expansion and the successful candidate will be involved in a variety of activities.

Applicants should have a clean, current driving licence and a car.

Details may be discussed with Mrs V. Conley, Area Health Education Officer, telephone Derby 312321 Ext. 53.

Application form and job description available from the Area Personnel Division, "Wildarlow", 121 Gemenston Road, Derby, DE 2GA. Telephone: Derby 383371.

Please quote ref: 2859.

Closing date: 11th October, 1978.

WEST MIDLANDS ADVISORY COUNCIL  
FOR FURTHER EDUCATION

(INCORPORATING THE UNION OF EDUCATIONAL INSTITUTIONS)

DEPUTY  
SECRETARY

SALARY SCALE PO1 (1) £6,513-£7,230 (inclusive of supplements)

Applications are invited for the post of Deputy Secretary which will become vacant on 1st January 1979. Candidates, male or female, should have previous experience in further education for this senior administrative and executive post.

Informal enquiries may be made to the Secretary, West Midlands Advisory Council for Further Education, Norfolk House, Smallbrook Queensway, Birmingham, B5 4HS. Tel. 021-643 8624. Application forms and further particulars may be obtained from the Chief Education Officer, Personnel & Services Branch, Education Officer, Margaret Street, Birmingham B3 3BU. Tel. 021-235 2587, to whom completed forms should be returned by 13 October, 1978.

Carrying over will disqualify.

BIRMINGHAM CITY COUNCIL

County of Cleveland  
EDUCATION DEPARTMENT

## ADVISER—£7,689-£8,373

Applications are invited from suitably qualified and experienced persons, for the above post, to have responsibility within the field of the education of young children (including Nursery Education and Pre-School Provision).

The successful applicant must have had appropriate teaching experience and/or administrative experience within the Education Service.

Applications are available from the County Education Officer, Education Offices, Woodlands Road, Middlesbrough, to whom completed forms should be returned by 13th October, 1978.

LANCASHIRE COUNTY COUNCIL  
CAREERS SERVICE

Vacancies for

## CAREERS OFFICERS

Salary Scale: AP/3/4 (£3,420-£4,320) plus £312 Annual Salary Supplement

The Lancashire Careers Service has vacancies for Careers Officers in the Districts of Lancaster, Ribblesdale, Blackpool, Hyndburn and Pendle.

Applications for these posts are invited from qualified Careers Officers and from students who will complete their professional training in 1978.

Further details and application forms may be obtained from the Chief Education Officer, P.O. Box 61, County Hall, Preston, PR1 8KJ, to whom they should be returned by the 13th October, 1978, quoting reference A592/10/JA.

## Education Department

## Mathematics Adviser

(Re-advertisement)  
Salary: £7,986-£8,870 including £297 London Allowance. (Southbury Scale—Burnham Head Teacher Group B)

Applications are invited for this post from candidates with good qualifications including an Honorary Degree, substantial teaching experience and a keen interest in the teaching of the subject to pupils of all ages and levels of ability. It is hoped that the appointment will be effective from 1st January, 1979.

A car allowance is payable.

Assistance is given with legal fees for house purchase and towards removal and resettlement expenses where appropriate.

Application forms and further particulars from John Fordham, Chief Education Officer, 265-269 High Road, Hford, Essex IG1 1NN, to be returned by 13th October, 1978.

Redbridge  
London Borough

## Leicestershire

## PROFESSIONAL ASSISTANT

(SCHOOLS)

£5,415-£6,030+£312 supplement

Applications (January, 1979, appointment) invited from graduates with good teaching experience in schools. The post, vacant on promotion, offers excellent opportunities for an energetic young man or woman to gain experience of education administration in a large authority. Tel. Leics. 871313, ext. 595, for further details.

Casual user car allowance. Removal expenses, legal fees, lodging allowance in approved cases.

Apply (no form) with names and addresses of two referees to the Director of Education, County Hall, Gelfield, Leicestershire LE3 8RF, by October 6, 1978.

WARWICKSHIRE COUNTY COUNCIL  
CHIEF ADMINISTRATIVE  
OFFICERAT MID-WARWICKSHIRE COLLEGE  
OF FURTHER EDUCATION  
(GROUP VI COLLEGE)

Salary P.O.1 (1-5) £5,415-£8,030 plus £312 supplement

This post requires considerable administrative and accounting experience. Applications are invited from suitably qualified and experienced candidates who feel they are prepared for a post demanding the acceptance of very considerable responsibility, but which in turn is capable of yielding much job satisfaction.

Further particulars and form of application may be obtained from the County Education Officer, 22 Noringme Street, Warwick, CV34 4SR (S.A.E., please), to be returned within ten days of the appearance of this advertisement.

D. G. Fuller,  
County Secretary.Bedfordshire  
Careers Officer

(Team Leader)

£4,245-£5,073 including supplement

A vacancy has arisen for an experienced careers officer to work in the South Bedfordshire area. Duties will include the organising of a small team of career officers in the development of career work in a group of schools. The post will carry a normal case load and some responsibility for work with sixth form pupils.

Application forms and further details are obtainable from the Chief Education Officer, County Hall, Bedford; or telephone Bedford 63222 ext. 245 (Mr. Lebe).

Closing date: 13th October, 1978.

## EDUCATION DEPARTMENT

## DEPUTY SCHOOL

## MEALS ORGANISER

£4,545 plus £520-£5,103











## Radio

## To entertain or inform?

Ann Jones on news and current affairs

So many column inches have been filled with discussions about what is current affairs and what is news; and, indeed, just how much of a news item should be allowed to have without some of the restraining influence of current affairs comment.

While television may attract more attention in this respect, radio has a long tradition of serious and well-presented programmes, which do not give guidance on what lies behind the news headlines.

Last week there was plenty of scope for the serious-minded listener, equipped with enough time and stamina—no slitting off in the middle at Analysts to make a cup of coffee. From the stone of the family in Japan (you must be assigned) to the state of the English wine-making industry (in Britain News) a stream of enlightenment poured out steadily from Radio 4.

It is good to see the return of Pte on 4, dealing last week with the problems of the small business—although the greater part of the programme was concerned with industrial tribunals. Are they protecting the fundamental right of everyone to earn a living? Or do they merely allow someone who left tools on the herring at Clidgton to waste a lot of public money and provide a good story for the papers?

Of course this illustrates one of the very basic problems about treating a serious subject in depth. How much knowledge can you safely assume on the part of the listener? And how do you divide your emphasis between entertainment and information? One cannot be for over explaining basic economics, or none of those. It is a delicate balance.

In Britain Now and From Our Own Correspondent go part of the way towards solving this problem by including several reports, some

of which are heavy, some less so. In Britain Now ranged from four minutes in Stratford to the disposal of radioactive waste in micro-electronics for cows. From Our Own Correspondent is one of those programmes which I find consistently informative, and which consistently includes the right subjects—certainly the obvious ones each week, the Camp David talks and Nicaragua, an excellent piece with a chilling description of the killing of innocent people in the streets. But where else in radio would you also have a fascinating reflection on the Russian class system? Did you know that there is a special traffic lane for high-up Russian party officials?

I suspect that the general view of the Employment Protection Act would be the one expressed by the small businessman on the programme—that it is too often used frivolously by people that only right-minded employer would have given their cards long ago. (This view was only enhanced by a brief word from the gentleman sacked after taking a nap at Vauxhall Motors. "I suppose a lot of people think you're a very cheeky man, Mr. Jones," said David Henshaw. "No, I'm very honest with you see... I work very hard.")

But employers win two-thirds of cases coming before industrial tribunals. And, according to a trade union spokesman, only 2 per cent of complainants get their jobs back. I enjoyed hearing Horold Lever, minister responsible for small businesses, promising to do better. And Peter Oppenheimer has a nice line in pertinent questions. Why, he asked his small businessman, if life has become so impossible for them, don't they call out or stop complaining?

Analysis also devotes a nice chunk of time to its subjects, enough to really get to grips with an issue. Unfortunately the chosen issue was currency in the EEC. I listened to a very nice analysis of the EEC's currency to humanize it all, a one-finger with-eyes blue as a kitten, another who retreated with coral worry beads and an actor, but

my attention regrettably wandered at the end I was little wiser. I enjoy the sense of immediacy given by those crackling tapes, which bring to mind a beleaguered correspondent filing his report while civil war, flood and famine rage at his studio door. What men are these who speak with the BBC's voice of authority? And why are they all men? I refuse to buy the idea that women have less authority. The only woman I heard discussing current affairs during the week was Mary Golding—and it would be impossible to fault her authority or her competence.

Some hint of those iron-nerved, well-spoken foreign correspondents was given in a short talk by John Osman who recently returned to England after some years abroad. I must confess I was by turns irritated, infuriated and incredulous. Unfair, perhaps, to be so irked by a personal opinion. But one is so used to hearing an impartial account in the same measured tones that personal opinion seems to be given official sanction.

Anyone who claims he chose to live abroad because it rains a lot here on drinking is expensive does lay himself open to some criticism. Never mind, I thought, he must be a jolly sort of chap. But back in England, Mr Osman was recommending such apparently novel activities as a visit to Parliament Square and a look at London's statues. And complaining about legislation for sex and race equality, the results of which he often finds trivial.

"You can't help laughing," he said. "But you don't quite know what you're laughing at." A lot of people living in London don't need Mr Osman's schoolmasterly asides to look about them. And I don't find sex discrimination funny. And, finally, I disagree with the remark about growing disaffection for the law. Civilized men and women... he said, "support the law when they understand it." Perhaps he should have a chat with some small businessman about the Employment Protection Act. Or make the most of his stay here in Britain Now.

## In the grand manner

Nicholas Wapshott on the work of Michael Powell

Of all British directors, Michael Powell is perhaps the most difficult to assess neatly. His peculiar talent, to be celebrated for the next six weeks at the NFF, does not bear easy classification. His career is marked by his uncompromising independence, his often unfashionable originality and his working partnership with Emeric Pressburger.

His initial inspiration came from working with Rex Ingram, the Irish director, on three films in 1926-27. "Ingram had an epic style," said Powell. "He also had the grand manner. These are things that if you see them when you are young you don't forget." Neither did Powell forget working with Alfred Hitchcock on *Chromosome* and *Blackmail*. By 1931, aged 26, he was making films on his own and had directed 23 quota quickies before his first full-length feature, *The Edge of the World*, in 1937.

The success of this caused Alexander Korda to sign Powell and team him with Pressburger, a screenwriter, to make *The Spy in Black*. This was the first product of an exceptional partnership, in which they shared directing and writing credits and produced together. In 1941 they founded their own production company, Archer Films, and built up a team of talented filmmakers around them. The designers Hein Heckrodt and Alfred Junge both won Oscars from their films. They persuaded Vaughan Williams to write his first film music, for *49th Parallel*, and they worked closely with Thomas Beecham on their operas.

Their films rejected realism and relied on an imaginative use of the studio, marched to heavily contrived, complicated scripts. They would ignore the usual conventions of plot and credibility and worried little about the constraints of good taste, specializing in the unusual and the provocative. Their intention

was to make people think and to succeed in marrying the most advanced in popular film, even if it meant a loss of audience.

Their most successful films were musicals, *Blackmail* and *The Life and Death of Colonel Blimp* (1943), which won the Oscar for Best Picture. *Blackmail* was a masterpiece of suspense, and *Blimp* was a masterpiece of satire.

Two films in particular, *The Life and Death of Colonel Blimp* and *Blackmail*, were made in much of winning the peace war. The widely held view that the war was being fought not to re-establish a pre-war status but to found a more humane and equitable Britain might be expected. *Blimp* was largely misunderstood.

At the end of the war the optimism was translated into a film which mixed ordinary people with fantasy. Dream sequences and flashbacks drew elaborate parallels between the past and the present. *Blackmail* was a masterpiece of suspense, and *Blimp* was a masterpiece of satire.

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## Transylvanian terrors

John James visits the two Draculas

Dracula at The Shaftesbury Theatre. Possessions of Dracula at The Queen's Theatre.

There are two Count Dracula in London in rival productions of opposite sorts. In rival productions of opposite sorts. In rival productions of opposite sorts. In rival productions of opposite sorts.

The Shaftesbury Theatre's production of *Dracula* is a modern American spoof on the original. It is a modern American spoof on the original. It is a modern American spoof on the original.

The Queen's Theatre's production of *Possessions of Dracula* is a more serious and more sophisticated. It is a more serious and more sophisticated. It is a more serious and more sophisticated.

Both productions are excellent. Both productions are excellent. Both productions are excellent. Both productions are excellent.

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## Music by way of the farmyard

John Maconie

Unit 3 introduces pulse, and the difference between beating in two and three (the method of establishing a concept by making distinctions is particularly noteworthy). Unit 4 leads up to Christmas with a group of carols, and introduces the music and story of Tchaikovsky's ballet *The Nutcracker*, for which a special puppet film and televised performance by the London School Symphony Orchestra are arranged.

Song material consists of 11 folk songs arranged from Europe and America, and there is the usual scope for playing along on simple percussion, as well as deceptively simple-looking piano accompaniments for teacher, though the authors admit that some songs are awkward for guitar, and may have to be transposed in key.

From coming to quantifying words is a considerable mental leap, even for adults, but it is a message that television can put across very well. And since language and musical recognition are two essential aspects of musical notation, it follows that learning to read music should be so much more easily.

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## The why of self-help

Carolyn O'Grady

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## Radio

## Improvised trouble

Heather Neill

Drum Workshop (11-13) BBC Radio Mondays 11.40-12.00 (fortnightly)

Don Garrett has never really given up teaching. All his drama workshop programmes are piloted in schools, where he sometimes helps to take the lesson. He is a frequent visitor to teachers' centres, and, after a career in schools and teacher training, he has numerous contacts in the profession who can be consulted at every stage in the preparation of material.

This emphasis on the needs of the ordinary teacher in the ordinary classroom is one reason for Drama Workshop's success as a stimulating resource, a "linear pack". As in previous series, the teacher is encouraged to edit the tapes according to the requirements of a particular group of children. Gone are the days when schools could drama meant a rest for the teacher, which, given the number of teachers now experienced in using improvisation and other drama techniques, is as it should be.

Each 20 minute tape consists of acted scenes, often introduced by a presenter who asks leading questions which can be resolved by the class in action. The result is a lesson in drama, and a lesson in which the programme ends should be in small doses and with the teacher in control. (He or she can even avoid using the presenter's voice if that is preferred.) The teachers' preview programme, which was broadcast on Monday, featured a discussion by teachers of various ways to use the material, but comprehensive notes are produced by the BBC.

The next two broadcasts are *Yak's a Bully*, written and presented by Michael Maynard (October 2) and *Always in Trouble*, with Tony Coult (October 16). Michael Maynard's informal, almost casual, form of address is just right for this kind of programme. The short scenes show bullies at work in school, among grown-ups and on an imaginary planet and there are plenty of opportunities for discussion (of what might be a sensitive topic in some circles) as well as acting-out. This programme's format is typical of the series: a theme is introduced by the presenter, who is encouraged to edit the tapes according to the requirements of a particular group of children. Gone are the days when schools could drama meant a rest for the teacher, which, given the number of teachers now experienced in using improvisation and other drama techniques, is as it should be.

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## Briefings

Radio and tv FE and general interest

Youth Out of Work (Sunday, 10.05 BBC 1)

A radical solution to the problem of youth unemployment: Professor Tam Stonier advocates "a massive expansion of the educational system".

Wegweiser (Sunday, 14.00, Friday, 11.00 VHF 4)

A second stage series for those who followed Kontakte. Aims to build on an elementary knowledge of German.

Emmeline (Sunday, 14.30, Wednesday, 11.00 VHF 4)

The radio sessions of this beginning French course include interviews and conversations.

Digione (Sunday, 15.30, Tuesday, 11.00 VHF 4)

Twenty radio programmes linked to television work provide basic Spanish for viewers.

Tenishing Young Readers (Sunday, 16.00 VHF 4)

For teachers in infant and junior schools to assist in the practical development of reading and writing skills.

Helping With Spelling (Sunday, 16.30 VHF 4)

Tuans involved in the Adult Literacy Programme are given help in identifying and remedying spelling difficulties. Additional advice is included on writing problems.

Principles of Counselling (Sunday, 17.00 VHF 4)

Eight programmes for those whose everyday work sometimes involves counselling others. How can key issues be isolated? When is expert help required?

World Powers in the Twentieth Century (Sunday, 17.30, Monday, 11.00 VHF 4)

The political, economic and social history of the United States, the Soviet Union and China since the Second World War. The programme concentrates on some of the more significant people and events and if studied in conjunction with the book, can lead to an O level assessment.

A Taste of Work (Sunday, 23.15 BBC 1)

Five films looking at schemes to help unemployed young people. Is the Government's £800m Youth Opportunities Programme showing signs of success?

The Schools Broadcasting Council (Monday, 05.05 BBC 1), Wednesday, 16.55 BBC2

What is the BBC? How does it function? Filmed reports show the decision-making process and the relationship between producers, education officers and teacher members of the Council.

Roads to Conflict (Tuesday, late night BBC 1)

A series tracing the roots and development of the Arab/Israeli conflict from the end of the 19th century. Programme one gives a portrait of the land during the last years of the Ottoman Empire and explains the beginnings of Arab anti-Zionism.

For schools

Merry-Go-Round (Monday, 10.00, Thursday, 9.45 BBC 1)

Eight and nine-year-olds look at aspects of rivers and canals, and life in, on and beside them in a unit entitled "Water".

Music Time (Monday, 11.22, Wednesday, 10.23 BBC 1)

Linking in with Merry-Go-Round, "Sounds by the Sea" takes seven- to nine-year-olds on a sea journey. They pick out as many sounds as possible, and learn about pitch.

General Studies (Monday, 11.45, Friday, 14.35 BBC 1)

"The Making of the Britons" is a chronological narrative of the British Isles until the coming of the Romans. Sixteen to 19-year-olds also survey archaeological techniques.

Man (Thursday, 11.20 VHF 4)

Ten to 12-year-olds follow the "Fossil Trail".



Excellent David Bellamy, the media's wonder-biologist, sets up a simulated experiment by the boiling springs of Lako Hannington in Northern Kenya during part two of "Botanic Man", a new series of 10 films which describe evolution from a botanical point of view. Bellamy starts with the last common ancestor and describes life and vegetation in countries including Africa, Asia, Australia and New Zealand, finally arriving in the United States. It starts on October 17 at 7 pm, and was made by Thames Television.

## Centenary hoof prints

All The Queen's Horses (colour, 16mm or Super 8, 14 minutes)

Sponsored by the Post Office, 16mm version on free loan from Golden Films, 22 Frances Road, Windsor, Berkshire SL4 3AF. Super 8mm on free loan from Barry Wors, 115 Borden Lane, Sittingbourne, Kent, ME10 1B7.

To mark the issue of a series of commemorative stamps, the Post Office has made a film. All The Queen's Horses. Her Majesty's own pet don't appear in the film. It is all so rushed that it is difficult to watch. I waited more than 20 minutes before I was able to see a stamp to be printed in five colours (gold or silver being the fifth) and perforated in 55 seconds.

All The Queen's Horses is packed with information, but unfortunately it is all so rushed that it is difficult to watch. I waited more than 20 minutes before I was able to see a stamp to be printed in five colours (gold or silver being the fifth) and perforated in 55 seconds.

The film explains the characteristics of each breed. Welsh ponies for example, are very sturdy, hardy and also for energy and enthusiasm. It would be up to the teacher to channel this into a constructive project.

To accompany the film the Post Office has produced a number of posters and booklets on the fund and on specific countries are also available.

## Exhibition

## Gnomonic gestures

The Midland Group Gallery in Nottingham continues its radical forward demo on behalf of the Western Tradition with the first showing in this country of the photographs of René Magritte, Marc Chagall and Gerhard Richter, along with recent paintings by Stephen McKenna. The Richter pictures are huge, photographs of his huge paintings made from photographs of 48 notable Europeans.

There is a kind of gnomonic gesture about the whole two floors of exhibits, with Richter's full frontal faces leading us round a corner to Gillase's, mannered slide show downstairs while, above, McKenna's still, still his struggles with and against Magritte's pose and antics.

The exhibition invites this kind of wondrously superficial response. Once we have got such absurd remarks out of the way we can see that the struggle is real enough, the attempts to deal with it not at all pedantic and the consequences of succeeding or failing to face the crisis which the exhibition represents are life and death matters.

Or so the argument goes. It is a profound show or a con—and I am sure which. The McKenna will go on to Edinburgh and the Magritte will be back in Britain in the spring. But see this whole collection if you can, go and argue it through with Lynda Morris, who organized it. You will find her sitting downstairs with all those faces—and full of conviction.



D. J. Hart René Magritte's *The Giant*, 1937

## Theatre

## Battery hens and Green Cross Men

Topography is Too Late! Youth Theatre Workshop National Theatre Cottages

The current vogue for "looking at life" in youth theatre ventures these days is a throwback to the styles which teenagers read poems about in their pupils and catheter naves. *Topography is Too Late* in the Cottages last week looked backwards a good 15 years. There were the earnest face and figures of the block jacks and jokers, and those old folksy songs, and subject matter ranging from cruelty to suicide to pollution, radiation and put overcrowded cities.

In a hour and a quarter seems rather short measure for discussing

the main problems of the world today. And it's hard to identify with the sentimental intensity that sounds off one minute about horrors and then 10 minutes later dies away in the ribs with a jolly skotch about the "Green Cross Men". I had no idea whether I was being asked to join a movement or have a belly laugh or jump into the Thames. All credit to director Paul Ranley and his cast for amassing so much material—a lot of which was carefully worked and some of which was funny—but besides recurring lamentable punchlines, this antic sketch business is a two-edged sword and many a witty idea ends in a however irrelevant, pointless or absurd.

As for the staging, it was prodigal time—the current Cottages toy action over the subtle wit and a little less if you wish to see a more of the performance through the back of someone else's head. When the setting changes every 10 seconds, those with weak ankles better to the well. It looked a lot better from up at the top and the sound and light departments had a field day. A lot of talent glowed through the well-meaning muddle, and it was a pleasure to hear a few lines of poetry from a number of the cast. *Topography is Too Late* will be performed at the Royal Court in March.

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